

INDIAN TARIFF BOARD

Evidence

recorded during enquiry on the

GRANT OF PROTECTION TO THE  
MANUFACTURE OF ELECTRIC  
WIRES AND CABLES



CALCUTTA: GOVERNMENT OF INDIA  
CENTRAL PUBLICATION BRANCH  
1932

Price Rs. 2 or 3s. 6d.

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No. 707-T. (1).

GOVERNMENT OF INDIA.

DEPARTMENT OF COMMERCE.

*Simla, the 11th May, 1931.*

RESOLUTION.

TARIFFS.

In pursuance of paragraph 3 of the Resolution by the Government of India in the Department of Commerce No. 3748, dated the 10th July, 1923 (Tariffs), the Government of India have decided to refer to the Tariff Board an application for protection to the manufacture of electric wires and cables, other than paper-insulated cables, which has been received from the Indian Cable Company, Limited, Calcutta.

2. In making its enquiry the Board will be guided by the principles laid down in the Resolution adopted by the Legislative Assembly on the 16th February 1923 and will consider—

- (i) whether the conditions laid down in the Report of the Indian Fiscal Commission are satisfied in the case of the industry and whether it should be protected;
- (ii) if so, in what form and for what period protection should be given; and
- (iii) how its recommendations, if any, will affect other industries.

5. Firms and persons interested who desire that their views should be considered by the Tariff Board should address their representations to the Secretary to the Board.

ORDER.—Ordered that a copy of the above Resolution be communicated to all local Governments and Administrations, all Departments of the Government of India, the Central Board of Revenue, the Director General of Commercial Intelligence and Statistics, the Indian Trade Commissioner, London, the Secretary, Tariff Board, His Majesty's Trade Commissioner in India, all Chambers of Commerce and Associations, the Canadian Government Trade Commissioner in India, and the Secretary, Imperial Council of Agricultural Research.

Ordered also that it be published in the *Gazette of India*.

J. C. B. DRAKE,

*Joint Secretary to the Government of India.*

**Press Communique issued by the Tariff Board on the 19th  
May 1931.**

Under Resolution No. 707-T. (1), dated the 11th May, 1931, the Government of India, Commerce Department, have referred to the Tariff Board an application for protection to the manufacture of electric wires and cables, other than paper-insulated cables, which has been received from the Indian Cable Company, Limited, Calcutta.

The Board has taken up the enquiry immediately and all firms and persons interested who wish their views to be considered by the Board should address written representations (with five spare copies) containing a full statement of their views and all data upon which they are based, to the Secretary, Indian Tariff Board, "Burnside", Ootacamund, not later than June 10th.

**Questionnaire for the Indian Cable Company, Ltd.**

1. To what extent is the capital invested in your Company held by Indians? How many Indians are Directors? How many Indians (if any) form part of the superior management?

2. What has been the actual output of your works in (i) quantity and (ii) value for each year since manufacture commenced of—

- ✓ (a) Rubber insulated wires and cables—
- (i) less than 1/80th of a sq. inch in sectional area;
  - (ii) not less than 1/80th of a sq. inch in sectional area.
- (b) Bare copper wire other than telegraph and telephone wires—
- (i) less than 1/80th of a sq. inch in sectional area;
  - (ii) not less than 1/80th of a sq. inch in sectional area.
- (c) Telegraph and Telephone wires and cables—
- (i) less than 1/80th of a sq. inch in sectional area;
  - (ii) not less than 1/80th of a sq. inch in sectional area.

3. Have you manufactured any aluminium wires and cables? If so, please state since when and in what quantities.

4. What is the full capacity of your works as equipped at present for the manufacture of various classes of wires and cables?

5. What are the principal materials required for the manufacture of the classes of wires and cables in which you are interested? What are your annual requirements of each of these materials?

✓ 6. What quantity of each of these materials is required per unit of wire and cable?

✓ 7. From where do you obtain your principal materials and at what prices?

8. Which of these are now obtainable in India or are likely to be obtained hereafter?

9. To what extent is skilled labour required in your works? Is there any difficulty in securing sufficient labour?

10. What is the total labour force employed and the average rate of wages?

11. What arrangements, if any, have you made for housing your labour and promoting its welfare in other directions?

12. What progress has been made since the works were established in the substitution of Indian for imported labour? What facilities are given to Indian workmen to acquire training in skilled work or for training apprentices?

✓ 13. What arrangements are in force for the supply of power to your works? What is the cost per unit?

14. In what parts of India have you so far found your principal markets? What are the distances which separate them from the factory?

15. Please state—

- (a) the prices at which the principal classes of electric wires and cables which compete with your products have entered the country during the past seven years, and
- (b) the present prices.

N.B.—The c.i.f. price, landing charges and Customs duty should be shown separately.

✓ 16. Please state the prices realised by you during the same years for corresponding classes of wires and cables manufactured by you.

17. If the prices realised by you have been lower than the corresponding import prices, please explain the reasons for the difference. Illustrate your answer if possible by specific instances.

18. Do you consider your works sufficiently large as an economic unit of production and your machinery and equipment sufficiently up to date and efficient?

19. Give a brief description of—

- (a) your plant and machinery, and
- (b) the process of manufacture in your works.

✓ 20. What is the block value of your property as it stood in your books at the end of the last complete year for which figures are available, under the following heads:—

- (a) Lands.
- (b) Buildings.
- (c) Plant and machinery
- (d) Miscellaneous assets.

21. What do you estimate would be the present day cost under the above headings of erecting a factory having the same capacity as your factory?

22. Please state the profit which has accrued on the working of your factory in each year since you commenced manufacture and the objects for which it was allotted.

✓ 23. Please fill up Forms I, II and III annexed to the questionnaire regarding works costs.

✓ 24. What are the rates of depreciation allowed in your case by the Income-Tax authorities? Do you consider them suitable?

25. What is the working capital which the Company requires—

- (a) according to its present output;
- (b) according to the output equivalent to your full capacity?

26. Please furnish an estimate of—

- (a) the average stocks of materials, fuel and finished goods held by you, and
- (b) the average outstandings in respect of goods sold by you.

✓ 27. Please state—

- (a) the annual amount of your Head Office expenses, and
- (b) your Managing Agents' commission.

28. Do you wish to make any proposals regarding the amount, rate, form or scope of protection other than those contained in your letter to the Government of India dated the 10th July, 1929?

29. Please prepare a detailed estimate of the additional capital expenditure which would be required in the case of (i) any hydro-electric project and (ii) any Municipal electric supply scheme for which you are in a position to supply figures if it were decided to accept your proposals for increasing the duty on (a) both insulated cables and bare conductors and (b) only bare conductors. To what extent would it be necessary in consequence to raise the price of electricity to consumers?

30. To what extent would your proposals, if accepted, affect the cost of telegraph and telephone wires and cables?

## FORM I.

Total Expenditure incurred at Works.

	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
1. Copper Rod . . . . .					
2. Other Materials . . . . .					
<i>N.B.</i> —Expenditure on each principal materials to be shown if possible separately.					
3. Labour . . . . .					
4. Water . . . . .					
5. Power and Fuel . . . . .					
6. Repairs and maintenance . . . . .					
7. Supervision and Office Establishment.					
8. Packing . . . . .					
9. Miscellaneous . . . . .					
Total Output . . . . .					

## FORM II.

Works Cost per 100 yards of rubber insulated cable of a typical class and size not less than 1/80th square inch.

	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
1. Copper Rod . . . . .					
2. Other Materials . . . . .					
<i>N.B.</i> —Expenditure on each principal material to be shown if possible separately.					
3. Labour . . . . .					
4. Water . . . . .					
5. Power and Fuel . . . . .					
6. Repairs and maintenance . . . . .					
7. Supervision and Office Establishment.					
8. Packing . . . . .					
9. Miscellaneous . . . . .					
Total output of rubber insulated cables.					

## FORM III.

*Works cost per Hundredweight of bare copper conductor of a typical class and size not less than 1/80th square inch.*

	1926-27.	1927-28.	1928-29.	1929-30.	1930-31;
1. Copper Rod . . . . .					
2. Other Materials . . . . .					
<i>N.B.—Expenditure on each principal material to be shown if possible separately.</i>					
3. Labour . . . . .					
4. Water . . . . .					
5. Power and Fuel . . . . .					
6. Repairs and maintenance . . . . .					
7. Supervision and Office Establishment.					
8. Packing . . . . .					
9. Miscellaneous . . . . .					
Total output of bare copper conductors.					



## The Indian Cable Company Limited, Calcutta.

### A.—WRITTEN.

(1) *Letter No. L. G.-1/2684/C., dated the 10th July, 1929, to the Government of India.*

We forward herewith our application, for Government assistance in the form of protection on our products and request that in view of the serious position of the Company steps may be taken to investigate our case at an early date.

The Directors of this Company wish to approach the Government of India with this their application for assistance in establishing this Industry in India. Although a certain amount of assistance was given in the form of a 5 per cent. Import Duty on Rubber Insulated Cables over 1/80th sq. inch sectional area as from April, 1st, the Directors still view the unsatisfactory conditions prevailing with grave concern.

To facilitate a clear understanding of the disadvantages under which we have had to carry on business since the inception of this Company it is desirable to briefly describe the circumstances which have had an adverse effect on the Company's position between 1920 and 1928.

2. This Company was floated in 1920 when all the articles it was proposed to manufacture were subject to a 15 per cent. Import Duty. The Raw Materials were also subject to a varying Import Duty, but as Government at this time declared its policy of discriminating protection for Indian Industries we anticipated no difficulty in obtaining assistance at least to the extent of the reduction or entire removal of the Import Duty on any Raw Materials we might have to import. With a duty of 15 per cent. on the finished article we had every reason to hope that the industry could be established in a very short time, and that same would be a success financially.

Before our Factory was fully equipped the Import Duty of 15 per cent. on Heavy Electrical Conductors was reduced to 2½ per cent. whilst the duty on the Raw Materials to manufacture such conductors remained at 15 per cent. As these particular conductors would form 75 per cent. of our total output, this change in tariff was a very serious blow to our Industry. So much, so in fact, that the advisability or otherwise of continuing further with the equipment of the Factory was very seriously considered at that time by the Directors.

In 1923 we approached Government with a request to exempt us from payment of Import Duty on all our Raw Materials, and it was arranged that we would be allowed to import into the country Black Copper Rods Duty free. Rubber and Sulphur were also exempted from Import Duty about the same time. This left us at a disadvantage in regard to Lead Covered Cables in particular, as these were then imported on a 2½ per cent. Duty whereas Pig Lead for the manufacture of this cable was subject to a 15 per cent. Duty; the same applied to numerous Chemicals and Cottons which could not be obtained locally. It was decided, however, that the factory should be completed and that cables and wires should be produced in India. The first cables manufactured by us were marketed in August, 1923.

In 1925 when these concessions were granted our case was referred to the Tariff Board for investigation, but owing to pressure of work was not considered until 1928.

In October, 1927, the remaining 2½ per cent. Duty on the Heavy Electrical Conductors was abolished thus making our position, bad as it was previously, still worse. In July, 1928, we were examined by the Tariff Board on the grounds of Tariff Inequality and as a result a duty of 5 per cent. on Heavy Rubber Insulated Cables was recommended, which duty was intended to compensate for the duty we were then paying on imported Raw Materials. The Tariff Board recommendation was accepted by Government and on April 1st, 1929, a revised duty of 5 per cent. on Heavy Rubber Insulated Cables came into force.

3. We are satisfied that our position to-day is worse than it was prior to the removal of the remaining 2½ per cent. Duty on Heavy Electrical Conductors on October 1st, 1927. In 1926-27, we made a gross profit of Rs. 51,569 on a turnover of Rs. 15½ lakhs. In 1927-28 our profit was Rs. 42,571 on a turnover of Rs. 18,65,000. For the six months, October 31st to March 31st of the financial year 1927-28, Heavy Electrical Conductors were admitted duty free. This reduced our profit on that year's working by Rs. 35,000. To compare conditions prevailing in 1926-27 with those now in force including the 5 per cent. Duty on Heavy Rubber Insulated Cables we would give the following figures:—

In 1926-27, there was an Import Duty of 2½ per cent. which increased our Revenue by 2½ per cent. on Rubber Cables, value Rs. 4 lakhs, and 2½ per cent. on Copper Wire, value Rs. 8 lakhs=Rs. 30,000. To adjust the Tariff Inequality complained of we have been assisted to the extent of 5 per cent. Duty on Rubber Insulated Cables only, value Rs. 4 lakhs=Rs. 20,000. As the difference between these two figures, i.e., Rs. 10,000 is 20 per cent. of the largest profit we had made to the end of the financial year 1928, which profit was insufficient to enable us to write-off even 50 per cent. of the depreciation allowed by the Indian Income Tax Act, it will be seen that our position is still far from satisfactory.

4. We request that we should be given assistance with all the articles we manufacture in the following way:—

- (a) An import duty of 10 per cent. on all electrical conductors whether insulated or uninsulated over 1/80th sq. inch in cross sectional area, other than paper insulated cables which the Company can not manufacture. The duty to remain in force for a minimum period of five years.
- (b) Alternative to (a).—An import duty of 15 per cent. on the articles enumerated in (a) for a period of three years.
- (c) A specific duty on small rubber insulated cables of sizes 1/044 to 7/052 detailed in the Schedule attached.

Dealing categorically with the above request for assistance, we would remark as follows:—

In our former representation to the Tariff Board we requested that all raw materials used should be exempted from duty and that 10 per cent. protection should be given on uninsulated copper conductors. The exemption from duty on raw materials is, *vide* the Tariff Board Report, impracticable. In reference to the protection on copper wire we believe this would have been considered had our original application not been one of Tariff Inequality. The representation now made is definitely for protection and we suggest that the enhanced Import Duty should be levied on all electrical conductors other than Paper Insulated Lead Covered Armoured Underground cables having conductors over 1/80th sq. inch which cables we are unable to manufacture in India.

Recent events have clearly indicated to us that it is inadvisable to discriminate between copper conductors and any other form of conductors. The increase in price of copper a short time ago promptly resulted in Aluminium taking its place. We request therefore that duty should be charged on any form of bare (uninsulated) Electrical Conductor.

We ask that a 10 per cent. duty should also be imposed on insulated electrical conductors. This is suggested because the figures we had to prepare when we gave evidence before the Tariff Board on a former occasion clearly indicated that there is considerable scope in this country for the production of various forms of insulated conductors. The total production in the country not, as yet, forming a very large percentage of the total consumption.

In regard to rubber insulated wires and cables there is still a considerable amount of prejudice against goods made in India particularly amongst Indian Buyers. Many efforts have been made to overcome this prejudice, the most recent step being the certification of all stock cables by the Metallurgical

Inspector, Tatanagar, on behalf of the Indian Stores Department. This will achieve its object to some extent, but an Import Tariff which would make it possible to increase the difference in price between the Indian-made article and the imported article of the quality with which it competes, will have a much more certain effect.

(b) It is suggested that if 10 per cent. could not be given for five years possibly 15 per cent. would be given for three years. We would point out that if 15 per cent. Import Tariff is imposed on the electrical conductors enumerated by us the position would be very much as it was in 1920 when the Company was formed with the advantage that Paper Insulated Lead Covered Underground Armoured Cables will still be admitted duty free whereas in 1920 these also were subjected to 15 per cent.

(c) In requesting that a specific duty be levied on certain classes and sizes of Rubber Insulated Cables we have in mind that these particular sizes are selected as being the most common in use in India by manufacturers of very inferior material, the use of which should be discouraged, and are shipped to India at a very low valuation. We suggested in our letter dated March 5th, 1928, to the Tariff Board that cable which would not pass the test specified in our letter should be refused admission into this country. Owing to the difficulty in ascertaining whether the cable imported *via* all the ports would pass this test, it appears to us unlikely that our original suggestion is practicable. We would, therefore, put forward the alternative suggestion that if these inferior cables must be imported into India they should be chargeable with the same amount of Import Duty as the good quality cable with which they compete.

To clearly indicate what we proposed a Schedule is attached hereto showing the proposed specific duty on the different cables. We sincerely hope that something can be done in this direction as although these inferior cables are sold at prices considerably below those obtainable for material manufactured to the highest standards, the difference between cost and selling price is much greater than in the case of the better class material. This places before us a great temptation to produce and market something very cheap and attractive in appearance which would ultimately have the effect of confirming the suspicion of the sceptical buyer that materials manufactured in India are not always of the highest quality.

5. The Government of India have just assisted\* us further by confirming the continuance of the arrangement whereby we are permitted to import Black Rod free of duty. This concession has also been extended to Aluminium Rod and Copperweld Rod. The concession only applies to importation *via* the port of Calcutta. We request that in the event of our receiving the assistance we request and our deciding to commence manufacture in the vicinity of other Ports, similar arrangements be made concerning importation *via* such ports.

6. The trading results of this Company were placed before the Tariff Board at our last examination together with considerable information relating to the adverse conditions in which we are compelled to trade. The subsequent report clearly states that there is a "*prima facie*" case for protection. It appears to be sufficient to state here that after 5 years trading we have, unappropriated depreciation, arrears of Preference share dividends, and a carry forward debit balance totalling collectively Rs. 8,87,000. The authorised capital of the Company is Rs. 80,00,000, paid up Rs. 27,24,100.

We attribute our inability to trade profitably to:—

- (1) Tariff inequality, now partially rectified, but existent during the five years mentioned.
- (2) Prejudice.
- (3) Poor production, due to extremely low prices ruling, probably consequent upon bad trade in countries exporting to India.
- (4) Heavy Railway freight to and from our factory.

The advantages we have are:—

- (1) Low rent and taxes, cheap power, cheap labour.
- (2) Automatic machines, which in view of the cheap labour would make possible very low production costs if sufficient business was diverted to keep them fully employed.
- (3) Ability to give quick delivery.

The advantages described under 1 and 3 are quite appreciable but 2, which is the solution of our difficulty is at present negligible as price cutting and prejudice deprive us of business which is badly needed to enable us to meet the ever increasing competition by reducing our costs.

As a last resort we seek protection as the only sure corrective of this difficulty.

7. At the present time we employ from six to eight hundred Indians in our factory at Tatanagar. It was our intention to fully Indianise the Works, but labour troubles in the Jamsheedpur area have caused us to hold this decision in abeyance. We have a well-trained staff capable of producing the finest materials who are actually manufacturing at the present moment to the highest standards laid down.

8. Our Raw Materials are becoming more easily obtainable in India as our demand has, to some extent, created a supply. Copper, our chief raw material, is still imported though this metal is now being mined within 20 miles of our Works and should at some future date be an asset to us.

9. In conclusion the Directors wish to emphasize that they have not lightly undertaken to approach Government for protection. It is quite evident from our accounts that after having tried out the industry for a period of approximately six years, the disadvantages outweigh the advantages to such an extent that there is no possibility of an industry such as ours operating remuneratively unless Government assist by means of a protective tariff to raise the market price of the articles the Company can produce to such a level that the Company can undersell until the consumer, who would then be disposed to give the country-made article a trial, is educated to the quality it is possible to produce in this country.

The Directors express their hope that our case will be referred to the Tariff Board for early consideration as it is their considered opinion that the present circumstances are such that it is extremely doubtful whether it is advisable to further endeavour to foster this industry.

*Schedule of proposed specific duties to be charged on Rubber Insulated Cable Imported into British India.*

Size.	Braided Cable.	Lead Covered Cables.		Tough Rubber Sheathed.
		Single.	Twin.	Cable Single.
	Rs. A.	Rs. A.	Rs. A.	Rs. A.
1/-036 . . .	1 0	2 8	2 12	...
1/-044 . . .	1 0	2 8	3 0	2 0
3/-029 . . .	1 0	3 0	4 8	2 4
1/-064 . . .	1 4	3 0	5 0	2 8
3/-036 . . .	1 4	3 8	6 10	2 8
7/-029 . . .	1 8	5 0	7 12	3 0
7/-036 . . .	2 0	6 0	9 0	3 4
7/-044 . . .	2 8	...	...	4 0

NOTE.—Unit on which the specific duty is to be levied is not stated.

(2) *Letter from the Government of India to Messrs. The Indian Cable Company, Limited, Calcutta, No. 38-T. (12), dated the 5th November, 1929.*

I am directed to refer to your letter No. L. G.-1/2684/C., dated the 10th July, 1929, forwarding an application for the grant of tariff protection in respect of certain electrical conductors and cables manufactured by you.

2. In reply, I am to say that it is the rule of the Government of India not to refer any application for protection to the Tariff Board, unless there is a *prima facie* case that the industry is one to which protection may suitably be extended on the conditions laid down in paragraphs 97 and 98 of the Report of the Indian Fiscal Commission. Two of these conditions are:—

- (1) that the industry applying for protection must be one possessing natural advantages such as an abundant supply of raw material, etc., and
- (2) that the industry must be one which will eventually be able to face world competition without protection.

The Government of India observe that your application does not make any reference to the natural advantages claimed by the industry and its future prospects of dispensing with protection, and I am to request you to state your case on these points. In particular, the Government of India will be glad to be informed what circumstances exist to counterbalance the natural disadvantage under which the Indian Cable Company now labour of having to import their principal raw materials. I am further to request you to furnish the following information:—

- (a) to what extent your selling price is affected by the unwillingness of consumers to pay as high a price for the indigenous as for the imported article;
- (b) by what means you expect to bring down your costs to a figure which will enable you to compete on level terms with the imported article; and
- (c) to what extent your costs are raised at present by the production being lower than the capacity of the works.

(3) *Letter from Messrs. The Indian Cable Company, Limited, Calcutta, No. L. I-I/10840/C., dated the 4th February, 1930, to the Government of India.*

We very much regret the delay in replying to your letter No. 38 T.-(2) of November 5th, 1929, circumstances have rendered this unavoidable. Dealing with the points you raise categorically we reply as follows:—

2. The Tariff Board on the strength of the oral evidence given before the Board in July, 1928, have reported that a "*prima facie*" case has been made out by this Company for protection. Considered in the light of paragraphs 97 and 98 of the Indian Fiscal Commission Report in special reference to the two conditions mentioned in your letter we should say:—

- (1) There is an abundant supply of all the principal Raw Materials we use in this country. That some of these are not obtainable in the semi-manufactured form in which we need them is attributable to the absence of industries such as our own to create a demand for materials in that form.
- (2) If it is admitted that the materials are to be found in this country and that these must some day be available to the industries of the country it follows that importations will be unnecessary and this industry will then be able to exist without assistance.

In our application we have not emphasized our natural advantages other than comparatively low rent, taxes, cheap power and cheap labour. These alone have made it possible for this industry to continue for the first six

years of its existence with Import Tariffs and Railway freights against it. It is impossible to estimate the potential value of indigenous materials when the extent to which Government will encourage their exploitation cannot be guarded.

Our principal raw materials are Copper, Lead, Cotton and Rubber and we will state the position in regard to—

*Copper.*—There is an abundant supply of Copper ore at Ghatsila, 18 miles away from our factory, which is used for the production of copper suitable for the manufacture of brass. The importation of such copper (or brass) is subject to 15 per cent. duty. Electrolytic Copper in Rod form, such as we need, is not produced possibly for two reasons: (a) Insufficient demand, (b) Unattractive price. The latter is attributable to the fact that Copper Ingot is protected to the extent of 15 per cent. whereas the products with which our factory has to compete are admitted duty free.

*Lead.*—This metal is obtainable from Burma of the requisite quality. The price is affected by the fact that foreign importations are subject to 15 per cent. duty.

*Cottons.*—All cottons up to 26 counts are obtained locally. Finer counts are still imported but will be procured locally when available.

*Rubber.*—Is obtained in India of suitable quality and at reasonable cost. Importations are admitted duty free.

One natural advantage, therefore, is an abundant supply of Raw Materials.

On the question of comparatively cheap labour we should like to remark that this is an advantage as compared with other countries. In the past this advantage has not been felt to its full extent in consequence of the difficulty in obtaining sufficient business to enable us to employ it efficiently. This difficulty has had a still more serious effect where "Overhead charges" are concerned. These are almost constant for any factory output, and we can state definitely that the diversion of additional business to our factory will result in considerable reduction in the charge per unit of production under this head. In addition, the fact that our works are equipped for mass production with automatic machines is a handicap instead of an advantage unless sufficient business for standard articles is obtained to make possible economical running on one setting. As an illustration we would remark that the cost of setting up a machine is the same for 100 yards of cable as for 100 miles. That the business is not forthcoming is attributable to: (a) Prejudice, (b) Under selling by Importers of the commoner sizes and types which are badly needed to enable our Works to operate efficiently.

We give below our replies to the questions in the concluding paragraph of your letter.

(a) Our price must be reduced by 2½ per cent. in the case of copper and from 2½ per cent. to 15 per cent. in the case of cable to induce the ordinary private buyer to purchase the indigenous article.

It is necessary to explain here that some buyers, the Government is one, will purchase our products at the same price as the imported article. The average Indian buyer will not, however, either buy or have his house wired with the indigenous article even if same is offered at a price much below our competitors price for "Best British", on the other hand, if "British" is not particularly desired the buyer goes to the other extreme and purchases the cheapest Continental cable available which is sold at a figure corresponding to its inferiority. Indian cable falls between the two at present although in quality it is up to the British Standard.

(b) Increased production will bring down our costs to a competitive level. We contend that once our goods are established, which will be more quickly effected if a protective tariff is imposed to assist us, the business will be retained and cost continue at a reasonable level. A readjustment of tariffs to encourage not only this industry but those on which we are dependent will render us independent of either importations or Government assistance.

(c) Our costs are higher than they need by 5 per cent. in the case of copper and 10—15 per cent. in the case of cable. The economy, which can be effected by increased production, will be sufficient to reduce our costs to this extent apart from any further saving in interest on capital now locked up in stocks which will be avoided when all our raw materials are obtained in India.

Summarising the position and having particular regard to the penultimate paragraph of your letter, the natural advantages of the industry are—an abundance of cheap power (obtained mainly by reason of cheap coal), of comparatively cheap labour, ability to give customers in India quick and immediate deliveries, and an abundance of raw material. Such natural advantage will, provided the industry is given an opportunity of establishing itself, enable the Company to dispense in time with protection.

It is deferentially submitted that the Company, will, or, in any event, should, not, in the future, be under any natural disadvantage in having to import raw material. It has been shown that the only present importation of consequence, necessary is electrolytic copper. It may, we submit, be fairly assumed that it is the policy of the Government of India to foster industries of importance and having natural advantages. The manufacture of this product, which would, as in the case of our products, not leave India dependent upon sea-borne products of great value to Ordnance and to other Departments, must only be a matter of time, and any argument that our manufacture should not be protected until this natural advantage (as admittedly it will be) is obtained, should, we confidently submit, be disregarded. Our manufactures (adequately protected meantime) will, we contend, more than help in the attraction of capital to this other industry, of the highest importance.

Consequential on these submissions it is contended that the disadvantage of having to import raw materials is not existent. We have the coal and power at hand; the copper 18 miles away; indigenous cotton and indigenous rubber; Indian labour fully capable of the production of the Company's manufacture. Even with the present disadvantage (due in a great measure only to the present system of Tariffs on copper) as regards Electrolytic copper importations, the natural advantages given above so outweigh it that the Company should, we maintain, have no difficulty hereafter (provided it obtains the protection asked for) in manufacturing its products and selling at competitive and fair prices.

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(4) *Letter No. L. T. 1/29540/C., dated the 30th June, 1931, to the Tariff Board.*

We have pleasure in forwarding herewith our replies to your questionnaire.

In reference to Questions 2, and 15 and 16, we have experienced great difficulty in accurately arriving at our competitors approximate landed cost.

Our Managing Agents, British Insulated Cables, Limited, have assisted us with c.i.f. prices of British C. M. A. cables whilst Continental costs have been taken from letters in which business was offered to us at a figure based on the c.i.f. costs given.

In connection with uninsulated Conductors not less than 1/80th sq. inch in cross sectional area we feel that your questions (Nos. 15 and 16) do not quite go far enough and we propose in a few days time to amplify the information given in reply thereto.

We trust we have answered your questions in sufficient detail, should you however, either require further information or amplification of that given we are at your service.

*Replies to questionnaire.*

1. (a) On flotation of the Company the shares held were:—  
Indian 87,680, Non-Indian 57,500.

The Capital subscribed was insufficient to complete the factory and in 1922 6 per cent. Cumulative Participating Preference Shares were issued. Of 1,28,775 offered to Indian Shareholders only 320 were taken up.

On March 31st, 1930, the position was:—

Shares held by Indians totalled 62,136, Non-Indians 2,01,869.

(b) At the moment there are four Europeans and one Parsee on the Board of Directors.

(c) Two Indians hold senior positions in the Company. One is Accountant in the Head Office and the other is Manager of the Company's only Branch.

2. (a) Rubber Insulated Wires and Cables—

	Less than 1/80th of a sq. inch in cross sectional area.	Not less than 1/80th of a sq. inch in cross sectional area.
	Rs.	Rs.
1928-29 . . . . .	6,79,000	2,58,203
1929-30 . . . . .	6,54,800	4,20,176
1930-31 . . . . .	6,37,200	3,34,295

There is no basis on which the quantity can be given intelligibly. In one year a large proportion of multi-conductor cables was made in another practically none. Again there are four principal classes of cable each made in ten to twenty-six sizes and four to twelve different finishes.

- (b) Bare Copper Wire other than telegraph and telephone wires—

	Less than 1/80th of a sq. inch in sectional area.		Not less than 1/80th of a sq. inch in sectional area.	
	Quantity.	Value.	Quantity.	Value.
	T. c. qr. lb. oz.	Rs.	T. c. qr. lb. oz.	Rs.
1926-27 . . . . .	23 11 0 16 7	33,321	306 17 3 20 0	3,82,356
1927-28 . . . . .	33 10 2 2 5	41,555	478 14 2 19 13	5,55,292
1928-29 . . . . .	45 7 2 14 7	76,188	677 3 3 2 1	8,93,838
1929-30 . . . . .	36 9 0 12 7	53,946	275 16 2 4 12	3,41,992
1930-31 . . . . .	34 15 3 3 9	42,395	295 18 1 1 7	2,66,310

- (c) Telegraph and Telephone wires and cables—

	Less than 1/80th of a sq. inch in sectional area.		Not less than 1/80th of a sq. inch in sectional area.	
	Quantity.	Value.	Quantity.	Value.
	T. cwt. qr. lb. oz.	Rs.	T. cwt. qr. lb. oz.	Rs.
1926-27 . . . . .	441 16 2 2 13	5,74,340	...	...
1927-28 . . . . .	475 13 2 12 10	6,02,775	50 0 0 0 0	57,000
1928-29 . . . . .	534 18 0 23 6	6,95,500	249 1 1 23 12	3,31,170
1929-30 . . . . .	210 1 3 10 4	3,15,000	195 6 1 1 14	2,53,500
1930-31 . . . . .	341 5 0 25 10	4,09,200	201 11 2 10 5	2,47,230



3. The drawing of aluminium wire was commenced in August 1929. Production since then has been as follows:—

	T. cwt. qr. lb.
<b>Year 1929-30—</b>	
·300" x ·050" strip . . . . .	0 0 0 19
·112" wire . . . . .	0 0 0 4
·128" " . . . . .	0 2 1 8
·182" " . . . . .	0 6 1 2
·250" " . . . . .	0 0 2 14
3/-117 strand . . . . .	<u>2 2 0 21</u>
<b>TOTAL</b>	<u>2 11 2 12</u>
<b>Year 1930-31—</b>	
·300" x ·050" strip . . . . .	0 0 3 4
·080" wire . . . . .	0 1 0 0
·104" " . . . . .	0 0 1 22
·128" " . . . . .	0 1 0 15
·134" " . . . . .	0 2 3 12
·202" " . . . . .	7 19 2 0
·243" " . . . . .	2 12 2 0
3/-117 strand . . . . .	0 14 2 8
7/-111 " . . . . .	<u>1 11 0 5</u>
<b>TOTAL</b>	<u>13 3 3 10</u>

4. Maximum possible weekly output—

Copper Mill . . . . .	75 tons of H. D. copper for use as telegraph wire, trolley wire, and bare overhead conductors. Also all tinned and annealed copper wire for cable manufacture and instrument wires.
	Total—3,900 Tons.
Cotton and silk covering . . . . .	Total Value at present price—Rs. 29,25,000. 2 tons of various sizes.
	Approximate Value—Rs. 1,00,000.
Rubber insulated cables . . . . .	Taking the entire range of standard cable sizes as running at one time we could obtain the following maximum output:—
	Taped, braided and compounded cables, C. Y. S. cables, Flexibles, Rubber telephone cables, armoured cables . . . . . 4,500 coils;
	Lead covered cables . . . . . 1,500 "
	<u>6,000 "</u>
	Approximate Value—Rs. 30,00,000.

This would equal 6,00,000 yards of cable per week having a total weight of approximately 72 tons. In addition we manufacture against occasional orders the following materials:—Varnished cambrie cables, Hookah rubes (plain and silk covered), rubber covered metal rollers, gharry tyres, etc.

## 5. Material—

		Annual Requirements.					
		Tons.					
	Copper Rod						1,060
	Aluminium Rod						15
	Carbon black						700
	Cotton (Indian)						18,500
	Cotton (American)						3,500
	Cotton (Egyptian)						4,200
	Cotton (Glazed)						1,200
	French chalk						50,000
	Jute (Indian)						11,000
	Magnesium Carbonate						16,500
	Lead						175
	Raw rubber						45
	Silk (Rayon)						350
	Sulphur						5,700
	Tin						6,000
	Zinc white						19,000
	Zinc oxide						19,000
	Cable wax						36,000
	Paraffin wax						7,250
	Galvanised iron wire						18
							Sq. yards.
	Calico (printed)						80,000
							Gallons.
	Sulphuric acid						800
6.		100 yds.	100 yds.	100 yds.	100 yds.	100 yds.	
	1 cwt	1/044	1/044	7/029	600 meg.	23/0076	
	No. 10	600 meg.	6 0 meg.	600 meg.	grade	600 meg.	
	S. W. G.	grade fiat	grade	grade	braided	grade twin	
	copper	twin lead	fiat twin	braided	cable	cotton	
	wire.	covered	C. T. S.	cable.	7/064.	twisted	
		cable.	cable.			flexible.	
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	
	Copper	112-5488	3-516	3-516	5-45	26-5	2-51
	Tin	...	0-075	0-075	0-181	0-385	0-313
	Raw Rubber	...	1-332	4-082	1-429	4-927	1-787
	Waxes	...	0-094	0-500	1-427	2-956	0-103
	Cottons	...	...	...	0-525	1-931	1-062
	Lead	...	44-151	...	...	...	...
			Sq. yds.		Sq. yds.	Sq. yds.	
	Calico	...	2-50	...	2-625	4-956	...
		Gallons					
	Oils	1008	...	...	...	...	...
	Acids	2576	...	...	...	...	...
			lbs.		lbs.		
	Powders	...	1-116	5-022	0-965	2-89	1-124

The item 'Powders' includes materials which are compounded with raw rubber in varying proportions according to grades.

7.	Material.	Purchased from	Average price over two years. Annas per lb
	Copper rod . . . . .	England or America . . . . .	7-764
	Aluminium rod . . . . .	England . . . . .	10-35
	Carbon Black . . . . .	England . . . . .	6-23
	Cotton (Indian) . . . . .	India . . . . .	11-75
	Cotton (American) . . . . .	England . . . . .	16-0
	Cotton (Egyptian) . . . . .	England . . . . .	40-15
	Cotton (Glazed) . . . . .	England . . . . .	37-75
	French chalk . . . . .	England . . . . .	1-13
	Jute (Indian) . . . . .	India . . . . .	5-75
	Magnesium Carbonate . . . . .	England . . . . .	3-85
	Lead . . . . .	India . . . . .	2-17
	Rubber . . . . .	India . . . . .	7-95
	Silk (Rayon) . . . . .	India . . . . .	45-0
	Sulphur . . . . .	England . . . . .	1-52
	Tin . . . . .	England . . . . .	22-0
	Zinc white . . . . .	England . . . . .	2-735
	Zinc oxide . . . . .	England . . . . .	3-57
	Cable wax . . . . .	England . . . . .	5-675
	Paraffin wax . . . . .	India . . . . .	3-56
	Galvanised iron wire . . . . .	India . . . . .	1-59
	Calico printed . . . . .	England . . . . .	Sq. yard. 6-594
	Sulphuric acid . . . . .	India . . . . .	per gallon. 8-606

8. The following materials are obtainable in India of requisite quality:—

Cotton.	Rubber.
Jute.	Paraffin wax.
Lead.	Sulphuric acid.

Additional Materials which will eventually be obtainable:—

Copper.	Zinc white.
French Chalk.	Zinc oxide.
Magnesium Carbonate.	Galvanised Iron Wire.
Silk.	Calico.

Materials which may not be available but for which an indigenous substitute could be obtained in emergency—

American and Egyptian Cottons. Cable Wax.

\*This leaves Tin (obtainable from Malaya) and Sulphur which are not produced in India.

9. Of our total employees approximately 56 per cent. can be classified as skilled and 20 per cent. as semi-skilled. In the case of the actual manufacturing departments there was originally no skilled labour to our requirements. Our situation in the industrial area of Jamshedpur enabled us

to recruit from a class of people who possessed some small degree of industrialism. The training of this labour to a commercial standard of quality production occupied a period of two to three years.

In the case of the Engineering and Carpenters' Shops the labour was to some extent trained in these branches before recruitment. Special training was necessary for plant and processes that naturally they had never previously experienced.

As our output has increased, labour has been recruited from applicants for employment who assemble at the factory gate when it becomes known that there is a likelihood of vacancies. In almost all cases they are not skilled to our requirements and require thorough training. There has never been the least difficulty in securing sufficient labour.

10. The average numbers of employees in the factory during the past three years are as follows:—

	Average for 1928-29.	Average for 1929-30.	Average for 1930-31.	Actual numbers on the 1st June 1931.
<b>Wire Mill—</b>				
European . . . . .	1	1	1	...
Indian; skilled . . . . .	139	110	78	71
„ Aboriginal type . . . . .	71	60	39	35
<b>TOTAL</b> . . . . .	<b>211</b>	<b>171</b>	<b>118</b>	<b>106</b>
<b>Cable Departments—</b>				
European . . . . .	1	1	1	1
Indian; skilled . . . . .	78	74	73	70
„ Aboriginal type . . . . .	74	100	92	108
<b>TOTAL</b> . . . . .	<b>153</b>	<b>175</b>	<b>166</b>	<b>177</b>
<b>Offices, Engineering, outside Services, Medical, etc.—</b>				
European . . . . .	1	1	1	1
Indian; skilled . . . . .	91	106	105	97
„ Aboriginal type . . . . .	85	69	63	81
<b>TOTAL</b> . . . . .	<b>177</b>	<b>176</b>	<b>169</b>	<b>176</b>
<b>Entire Factory—</b>				
European . . . . .	3	3	3	2
Indian; skilled . . . . .	308	290	256	238
„ Aboriginal type . . . . .	230	229	194	222
<b>TOTAL</b> . . . . .	<b>541</b>	<b>522</b>	<b>453</b>	<b>462</b>

The average rates of wages paid to Indian employees at the factory during the past two years are as follows:—

	Rs.
Average rate per month to skilled class . . . . .	41·3
Average rate per month to aboriginal class . . . . .	13·83
Average rate per month for entire Indian employees . . . . .	28·4

The average rates for the various grades are as follows:—

	Rs. A.
	Per month.
Foreman . . . . .	115 0
	Per day.
Mistri (Electrical) . . . . .	2 0
Fitter (Mechanical) . . . . .	2 4
Turner (Mechanical) . . . . .	2 4
Carpenter (Packing, etc.) . . . . .	1 8
Mason (Building) . . . . .	1 15
Plate Setter } (Cable and Wire manufacture) {	1 8
Machine Man } . . . . .	1 4
Serang (In charge of unskilled labour) . . . . .	2 0
Coolies (unskilled males) . . . . .	0 9
Rejas (unskilled females) . . . . .	0 7

11. The accommodation provided for Indian employees is of 6 types as follows:—

A Type . . . . .	8 quarters for subordinate supervising staff living with families.
M4 Type . . . . .	24 quarters for men of charge hand and clerical standard who are living with their families.
B Type . . . . .	10 family type quarters but 2 are occupied by bachelors.
RN Type . . . . .	16 quarters all occupied by families.
New C Type . . . . .	40 quarters all occupied by bachelors.
Old C Type . . . . .	20 quarters all occupied by bachelors.

A total 118 quarters housing 210 employees. No rental charges are made for these quarters. The Company provide accommodation for skilled workers only, the aboriginal class preferring to live in their own bustees in adjacent villages. Of our 239 skilled employees, 210 or 87·9 per cent. are accommodated in rent free quarters, the remaining 29 or 12·1 per cent. providing their own accommodation. The entire unskilled staff provide accommodation for themselves.

With the hope of maintaining an improved sense of understanding between the management and labour a Works Committee was established in January, 1929, and has met monthly since that date. The Committee consists of ten workpeople elected by vote from ten sections and two representatives of the management. The object of the Committee is to discuss all problems for the welfare of the Company and the employees.

To control the recreation interests of the employees The Cableco Welfare Association has been formed and consists of three sectional committees controlled by one central committee.

The sub-heads are:—

- Literary.
- Dramatic
- Sports.

The Company has designed and built at their own cost a Clubroom in the centre of the quarters. The building consists of a stage for the presentation of plays, with two separate rooms for use as a library and a sports room.

A library which is well stocked with books and magazines in several languages is organised by the literary section.

The dramatic section is responsible for the organisation of English and Bengali plays.

The sports section arranges the Annual two day sports of field, track and humorous events held in January of each year. Football, cricket and badminton games are organised and local competitions entered.

12. (a) During construction the Company employed at its works an European Works Manager and an European Engineer. When the production stage was reached two European Experts in the manufacture of Cables and Wires respectively were imported.

At the present time the works is operated with an European Works Manager and an European Assistant. The Engineer is a Punjabi and all Departments are in charge of Indians. This progress accords to the policy of the Company which is desirous of Indianising as far as possible. Had it not been for labour agitator the process would have been more rapid. Even to-day there is no sense of security with an entirely Indian personnel whilst agitators so easily influence them and it is doubtful whether it will be possible to further reduce imported supervision for some considerable time.

(b) Every possible facility is given to Indian Workmen to acquire training. We have in fact trained every man in the works in the job he is doing and have done it so successfully that European supervision has been halved. Apprentices are trained in the manufacture of Cables and Wires and some of the more promising ones have been given facilities to enlarge their experience by being employed by the Managing Agents on contracts. One Indian trained by us at Tatanagar is in entire charge of a series of contracts for 11,000 and 37,500 Volts Over-head transmission lines which are being constructed for Government.

13. Electric power is supplied by The Tata Iron and Steel Co., at a voltage of 3,000. This is transformed by static transformers to 440 volts 3 phase for factory use.

The cost per unit is 0.75 annas.

14. (a) In regard to Copper Wire, our principal market is Calcutta and west of Tatanagar as far as Delhi.

Our competitor's lowest cost is f.o.r. the Ports of Calcutta, Bombay, Karachi, Madras and Rangoon. Our cost is a minimum f.o.r. Tatanagar.

We have the disadvantage of Railway Freight to any of the Ports. The Railway Freight from Tatanagar to the principal towns in the north of India (with Delhi as the limit) is the same as from Calcutta. West of Delhi the Railway Freight from the western Ports is lower than from either Calcutta or Tatanagar and the difference generally is sufficient to make it impossible to compete.

(b) Where rubber insulated cables are concerned our market extends to the whole of India. Recently the low price of Continental Cable has considerably reduced our market on the western side of India.

15 & 16. Attached hereto are the following Schedules:—

- |             |   |
|-------------|---|
| Schedule 1. | Copper Conductors over 1/80th sq. in. in area.            |
| „           | 2. 300 lbs. per mile Telegraph Copper Wire.               |
| „           | 3. Rubber Insulated Cables less than 1/80th sq. in.       |
| „           | 4. Rubber Insulated Cables not less than 1/80th sq. inch. |
| „           | 5. Rubber Insulated Flexible Cords.                       |

## SCHEDULE 1.

## BARE COPPER CONDUCTORS OVER 1/80TH SQUARE INCH.

(Prices are in rupees per cwt.)

Estimated cost of imported wire c.i.f.	Customs duty.	Landing and clearing charges.	Estimated cost of imported wire f.o.r. (i.e., including duty, landing charges, etc.)	Indian Cable Co.'s selling prices of similar conductors.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>1924.</i>				
56 13 0	1 6 9	0 3 7	58 7 4	64 0 0
60 11 3	1 8 0	0 3 7	62 6 10	68 4 0
57 2 0	1 7 0	0 3 7	58 12 7	64 1 0
55 0 0	1 6 0	0 3 7	56 9 7	62 1 0
57 8 0	1 7 0	0 3 7	59 2 7	64 14 0
<i>1925.</i>				
56 0 0	1 6 6	0 3 7	57 10 1	63 2 0
50 5 0	1 4 0	0 3 7	51 12 7	56 2 0
50 2 0	1 4 0	0 3 7	51 9 7	55 14 0
50 5 0	1 4 0	0 3 7	51 12 7	56 1 0
<i>1926.</i>				
50 5 0	1 4 0	0 3 7	51 12 7	56 1 0
50 4 0	1 4 0	0 3 7	51 11 7	56 1 0
50 4 0	1 4 0	0 3 7	51 11 7	56 0 0
50 2 0	1 4 0	0 3 7	51 9 7	55 14 0
<i>1927.</i>				
49 5 0	1 3 9	0 3 7	50 12 6	55 1 0
46 9 9	1 2 6	0 3 7	47 15 10	52 3 0
47 5 0	1 2 9	0 3 7	48 11 4	53 0 0
<i>2½ per cent. duty removed October, 1927.</i>				
50 0 0	.....	0 3 7	50 3 7	54 8 0
<i>1928.</i>				
50 2 0	.....	0 3 7	50 5 7	54 10 0
50 5 0	.....	0 3 7	50 8 7	54 12 9
50 5 0	.....	0 3 7	50 8 7	55 0 0
55 9 0	.....	0 3 7	55 12 7	60 1 0

## SCHEDULE 1—contd.

Estimated cost of imported wire c.i.f.	Customs duty.	Landing and clearing charges.	Estimated cost of imported wire f.o.r. (i.e., including duty, landing charges, etc.)	Indian Cable Co.'s selling prices of similar conductors.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1929.				
58 8 0	.....	0 3 7	58 11 7	63 5 0
57 5 0	.....	0 3 7	57 8 7	62 1 0
72 9 0	.....	0 3 7	72 12 7	79 13 0
62 12 0	.....	0 3 7	62 15 7	67 1 9
1930.				
62 12 0	.....	0 3 7	62 15 7	67 1 9
50 0 0	.....	0 3 7	50 3 7	54 2 0
40 12 0	.....	0 3 7	40 15 7	45 0 0
38 0 0	.....	0 3 7	38 3 7	42 5 0
39 5 0	.....	0 3 7	39 8 7	43 10 6
1931.				
39 2 0	.....	0 3 7	39 5 7	43 9 6
37 15 0	.....	0 3 7	38 2 7	42 5 0
39 4 0	.....	0 3 7	39 7 7	43 10 6
37 15 0	.....	0 3 7	38 2 7	42 5 0
36 8 0	.....	0 3 7	36 11 7	41 0 0
32 8 0	.....	0 3 7	32 11 7	37 0 0
31 4 0	.....	0 3 7	31 7 7	35 10 8

## SCHEDULE 2.

## 300 LBS. PER MILE TELEGRAPH COPPER WIRE.

Date of order.	Rate per ton at which order placed.	E. W. Bar on which price was based.	Margin between E. W. Bars and Selling price.
	Rs.		Rs.
<i>Order placed with the Indian Cable Company, Limited.</i>			
March 3rd, 1928	1,296	£66-15 = Rs. 890	406
October 30th, 1928	1,360	£75-5 = Rs. 1,000	360
August 28th, 1929	1,399	£84-15 = Rs. 1,130	269
June 6th, 1930	1,075	£59 = Rs. 786	289
<i>Orders placed away from the Indian Cable Company, Limited.</i>			
March, 1931	910	£50 = Rs. 676	234
	905	£50 = Rs. 676	229
	854	£50 = Rs. 676	178



## SCHEDULE 3.

## RUBBER INSULATED CABLES.

*The Indian Cable Company's Selling prices.*

(Prices in rupees per coil of 100 yards.)

Less than 1/80th square inch.

Taped and Braided.		Twin Lead Covered.	
1/-044	7/-029	1/-044	7/-029
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>1923-24.</i>			
7 0 0	15 12 0	.....	.....
<i>1924-25.</i>			
7 0 0	15 0 0	30 0 0	58 0 0
<i>1925-26.</i>			
6 12 0	11 0 0	26 8 0	57 0 0
<i>1926-27.</i>			
4 12 0	11 0 0	20 0 0	44 0 0
<i>1927-28.</i>			
4 0 0	10 8 0	20 8 0	49 0 0
<i>1928-29.</i>			
5 0 0	15 0 0	27 13 0	60 4 0
<i>1929-30.</i>			
5 10 0	14 13 0	24 1 0	53 2 0
1st March, 1931, Duty increased from 15 per cent. to 20 per cent.			
<i>1930-31.</i>			
Present Prices.			
4 14 0	12 13 0	18 8 0	44 8 0

## SCHEDULE 3.

## RUBBER INSULATED CABLES—600 MEGOHM GRADE.

*Cost of Importation and Approximate Selling Price per 100 yards.*

Less than 1/80th square inch.

	Taped and Braided.		Twin Lead Covered.	
	1/044	7/029	1/044	7/029
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<b>BRITISH.</b>				
<i>1924.</i>				
C.i.f. Price . . . .	5 2 4	10 5 0	22 3 11	45 12 4
Duty . . . . .	0 12 4	1 8 9	3 5 4	6 13 9
Landing and Clearing Charges . . . . .	0 2 2	0 2 9	0 7 1	0 4 6
<b>TOTAL</b> . . . . .	<b>6 0 10</b>	<b>12 0 6</b>	<b>26 0 4</b>	<b>52 14 7</b>
Approximate Selling Price . . . . .	<u>7 4 0</u>	<u>16 0 0</u>	<u>30 0 0</u>	<u>60 0 0</u>
<i>1925.</i>				
C.i.f. Price . . . .	5 4 2	10 13 0	24 10 4	46 0 6
Duty . . . . .	0 12 7	1 10 0	3 11 2	6 14 6
Landing and Clearing Charges . . . . .	0 1 0	0 1 7	0 4 11	0 7 2
<b>TOTAL</b> . . . . .	<b>6 1 9</b>	<b>12 8 7</b>	<b>28 10 5</b>	<b>53 6 2</b>
Approximate Selling Price . . . . .	<u>7 8 0</u>	<u>16 0 0</u>	<u>32 0 0</u>	<u>61 0 0</u>
<i>1926.</i>				
C.i.f. Price . . . .	6 6 1	10 14 1	24 11 3	46 1 4
Duty . . . . .	0 15 3	1 10 0	3 11 3	6 14 7
Landing and Clearing Charges . . . . .	0 1 5	0 1 8	0 4 11	0 6 4
<b>TOTAL</b> . . . . .	<b>7 6 9</b>	<b>12 9 9</b>	<b>28 11 5</b>	<b>53 6 3</b>
Approximate Selling Price . . . . .	<u>7 4 0</u>	<u>16 4 0</u>	<u>31 0 0</u>	<u>61 0 0</u>

## SCHEDULE 3—contd.

	Taped and Braided.		Twin Lead Covered.	
	1/044 Rs. A. P.	7/020 Rs. A. P.	1/044 Rs. A. P.	7/029 Rs. A. P.
BRITISH—contd.				
1927.				
C.i.f. Price . . .	6 5 2	10 11 5	24 0 0	45 11 9
Duty . . .	0 15 1	1 9 9	3 9 7	6 13 9
Landing and Clearing Charges . . .	0 1 4	0 1 5	0 4 10	0 6 1
TOTAL . . .	7 5 7	12 6 7	27 14 5	52 15 7
Approximate Selling Price . . .	5 8 0	12 0 0	30 0 0	58 9 0
1928.				
C.i.f. Price . . .	4 8 2	9 10 11	20 13 3	46 6 11
Duty . . .	0 10 10	1 7 3	3 2 0	6 15 5
Landing and Clearing Charges . . .	0 1 1	0 1 1	0 12 4	0 6 7
TOTAL . . .	5 4 1	11 3 3	24 11 7	53 12 11
Approximate Selling Price . . .	4 8 0	13 10 0	27 12 0	58 9 0
1929.				
C.i.f. Price . . .	4 9 8	9 9 7	18 10 8	45 12 0
Duty . . .	0 11 1	1 7 1	2 12 9	6 13 9
Landing and Clearing Charges . . .	0 1 2	0 2 4	0 4 6	0 5 11
TOTAL . . .	5 5 11	11 3 0	21 11 11	52 15 8
Approximate Selling Price . . .	5 10 9	16 7 0	28 1 0	63 4 0
1930.				
C.i.f. Price . . .	4 10 1	9 8 9	16 6 0	32 5 6
Duty . . .	0 11 1	1 6 11	2 7 3	4 13 8
Landing and Clearing Charges . . .	0 1 2	0 1 3	0 3 11	0 7 9
TOTAL . . .	5 6 4	11 0 11	19 1 2	37 0 11
Approximate Selling Price . . .	6 0 0	15 14 0	25 13 0	56 1 0

SCHEDULE 3—*contd.*

	Taped and Braided.		Twin Lead Covered.	
	1/044	7/029	1/044	7/029
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<b>BRITISH—<i>concl'd.</i></b>				
<i>1931.</i>				
Present Prices.				
C.i.f. Price . . .	3 14 5	8 2 8	14 6 9	23 5 10
Duty . . .	0 12 6	1 10 1	2 14 1	4 10 9
Landing and Clearing Charges . . .	0 1 1	0 0 11	0 2 2	0 4 1
<b>TOTAL . . .</b>	<b>4 12 0</b>	<b>9 13 8</b>	<b>17 7 0</b>	<b>28 4 8</b>
Approximate Selling Price . . .	5 3 4	13 12 4	21 14 0	47 12 0

## CONTINENTAL.

<i>1925.</i>				
C.i.f. Price . . .	3 1 6	8 5 10	16 11 2	26 5 10
Duty . . .	0 7 5	1 4 0	2 8 1	3 15 2
Landing and Clearing Charges . . .	0 0 9	0 1 6	0 2 6	0 3 11
<b>TOTAL . . .</b>	<b>3 9 8</b>	<b>9 11 4</b>	<b>19 5 9</b>	<b>30 8 11</b>
Approximate Selling Price . . .	4 2 0	12 4 0	24 0 0	37 8 0

<i>1926.</i>				
C.i.f. Price . . .	3 1 6	8 5 7	16 11 3	26 4 0
Duty . . .	0 7 5	1 4 0	2 8 1	3 15 0
Landing and Clearing Charges . . .	0 0 9	0 1 6	0 2 7	0 3 8
<b>TOTAL . . .</b>	<b>3 9 8</b>	<b>9 11 1</b>	<b>19 5 11</b>	<b>29 6 8</b>
Approximate Selling Price . . .	4 0 0	12 0 0	24 0 0	35 12 0

SCHEDULE 3—*contd.*

	Taped and Braided.		Twin Lead Covered.	
	1/044 Rs. A. P.	7/029 Rs. A. P.	1/044 Rs. A. P.	7/029 Rs. A. P.
<i>CONTINENTAL—contd.</i>				
<i>1927.</i>				
C.i.f. Price . . .	2 13 11	8 2 10	16 9 6	25 12 0
Duty . . .	0 6 11	1 3 8	2 7 10	3 13 9
Landing and Clearing Charges . . .	0 0 7	0 1 4	0 2 6	0 3 9
TOTAL . . .	<u>3 5 5</u>	<u>9 7 10</u>	<u>19 3 10</u>	<u>29 13 6</u>
Approximate Selling Price . . .	<u>3 8 0</u>	<u>11 12 0</u>	<u>23 8 0</u>	<u>36 0 0</u>
<i>1928.</i>				
C.i.f. Price . . .	2 12 4	7 5 2	16 2 0	25 6 0
Duty . . .	0 6 8	1 1 6	2 6 8	3 12 9
Landing and Clearing Charges . . .	0 0 7	0 1 2	0 2 4	0 3 7
TOTAL . . .	<u>3 3 7</u>	<u>8 7 10</u>	<u>18 11 0</u>	<u>29 6 4</u>
Approximate Selling Price . . .	<u>3 8 0</u>	<u>10 10 0</u>	<u>21 12 0</u>	<u>35 8 0</u>
<i>1929.</i>				
C.i.f. Price . . .	2 12 1	7 5 3	16 4 0	25 4 5
Duty . . .	0 6 8	1 1 6	2 7 1	3 12 8
Landing and Clearing Charges . . .	0 0 10	0 1 3	0 2 6	0 3 11
TOTAL . . .	<u>3 3 7</u>	<u>8 8 0</u>	<u>18 13 7</u>	<u>29 5 0</u>
Approximate Selling Price . . .	<u>3 8 9</u>	<u>10 12 0</u>	<u>22 0 0</u>	<u>35 8 6</u>
<i>1930.</i>				
C.i.f. Price . . .	2 10 4	5 11 9	12 5 10	22 4 4
Duty . . .	0 6 5	0 13 9	1 13 7	3 5 6
Landing and Clearing Charges . . .	0 0 6	0 0 8	0 1 11	0 3 5
TOTAL . . .	<u>3 1 3</u>	<u>6 10 2</u>	<u>13 5 4</u>	<u>25 13 3</u>
Approximate Selling Price . . .	<u>3 8 0</u>	<u>10 2 0</u>	<u>18 12 0</u>	<u>32 0 0</u>

## SCHEDULE 3—concl'd.

Taped and Braided.		Twin Lead Covered.	
1/044	7/029	1/044	7/029
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.

## CONTINENTAL—concl'd.

1931.

## Present Prices.

C.i.f. Price	2 8 0	5 8 1	11 5 4	20 3 3
Duty	0 8 0	1 1 7	2 4 3	4 0 7
Landing and Clearing Charges	0 0 7	0 0 11	0 1 10	0 3 3
TOTAL	<u>3 0 7</u>	<u>6 10 7</u>	<u>13 11 5</u>	<u>24 7 1</u>
Approximate Selling Price	<u>3 6 0</u>	<u>9 14 0</u>	<u>16 4 0</u>	<u>30 8 0</u>

NOTE.—Duty increased from 15 per cent. to 20 per cent. on March 1st, 1931.

## SCHEDULE 4.

## RUBBER INSULATED CABLES.

*The Indian Cable Company's Selling Prices.*

(Prices in rupees per coil of 100 yards.)

Not less than 1/80th square inch.

Taped and Braided. 7/064.		Twin Lead Covered. 7/064.
Rs. A. P.		Rs. A. P.
38 0 0	1923-24.	.....
32 0 0	1924-25.	127 0 0
33 10 0	1925-26.	117 0 0
29 8 0	1926-27.	150 0 0
	Duty removed October, 1927.	
29 0 0	1927-28.	140 0 0
	1928-29.	
	April 1st, 1929, 5 per cent. Duty imposed.	
44 12 0	1929-30.	154 0 0
42 3 0	1930-31.	141 8 0
40 11 0	Present Prices.	136 10 0

SCHEDULE 4—*contd.*

## RUBBER INSULATED CABLES.

*Cost of Importation over 1/80th square inch.**(Prices in rupees per coil of 100 yards.)*

	British.		Continental.	
	7/064 Taped and Braided Cable.	7/064 Twin Lead Covered Cable.	7/064 Taped and Braided Cable.	7/064 Twin Lead Covered Cable.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>1924.</i>				
C.i.f. Price . . .	29 5 9	120 4 0	24 8 0	.....
Duty . . .	0 11 9	3 0 0	0 9 10	.....
Landing and Clearing Charges . . .	0 2 0	1 3 3	0 2 11	.....
<b>TOTAL</b> . . .	<b>30 3 6</b>	<b>124 7 3</b>	<b>25 4 9</b>	<b>.....</b>
Approximate Selling Price . . .	<u>39 0 0</u>	<u>136 8 0</u>	<u>31 8 0</u>	<u>.....</u>
<i>1925.</i>				
C.i.f. Price . . .	30 6 7	122 10 0	24 7 2	.....
Duty . . .	0 12 2	3 1 0	0 9 9	.....
Landing and Clearing Charges . . .	0 2 3	1 3 7	0 3 10	.....
<b>TOTAL</b> . . .	<b>31 5 0</b>	<b>126 14 7</b>	<b>25 4 9</b>	<b>.....</b>
Approximate Selling Price . . .	<u>38 0 0</u>	<u>139 0 0</u>	<u>31 8 0</u>	<u>.....</u>
<i>1926.</i>				
C.i.f. Price . . .	35 7 6	132 8 0	23 8 10	.....
Duty . . .	0 14 2	3 5 0	0 9 5	.....
Landing and Clearing Charges . . .	0 2 7	1 5 2	0 3 9	.....
<b>TOTAL</b> . . .	<b>36 8 3</b>	<b>137 2 2</b>	<b>24 6 0</b>	<b>.....</b>
Approximate Selling Price . . .	<u>36 0 0</u>	<u>157 8 0</u>	<u>30 8 0</u>	<u>.....</u>

SCHEDULE 4—*contd.*

	British.		Continental.	
	7/064 Taped and Braided Cable.	7/064 Twin Lead Covered Cable.	7/064 Taped and Braided Cable.	7/064 Twin Lead Covered Cable.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
<i>1927.</i>				
C.i.f. Price . . . .	34 11 6	130 14 0	23 3 0	.....
Duty . . . . .	0 13 11	3 4 4	0 9 3	.....
Landing and Clearing Charges . . . . .	0 2 1	1 4 9	0 3 8	.....
<b>TOTAL</b> . . . . .	<b>35 11 6</b>	<b>135 7 1</b>	<b>23 15 11</b>	<b>.....</b>
Approximate Selling Price . . . . .	38 0 0	158 13 0	30 0 0	.....
NOTE.—Duty removed October, 1927.				
<i>1928.</i>				
C.i.f. Price . . . .	36 3 6	132 7 0	21 3 0	.....
Duty . . . . .	.....	.....	.....	.....
Landing and Clearing Charges . . . . .	0 2 11	1 5 2	0 3 5	.....
<b>TOTAL</b> . . . . .	<b>36 6 5</b>	<b>133 12 2</b>	<b>21 6 5</b>	<b>.....</b>
Approximate Selling Price . . . . .	37 2 0	148 13 0	26 12 0	.....
<i>1929.</i>				
C.i.f. Price . . . .	37 4 0	127 9 0	19 14 9	.....
Duty . . . . .	1 14 0	6 6 0	1 0 0	.....
Landing and Clearing Charges . . . . .	0 7 2	1 4 5	0 2 11	.....
<b>TOTAL</b> . . . . .	<b>39 9 2</b>	<b>135 3 5</b>	<b>21 1 8</b>	<b>.....</b>
Approximate Selling Price . . . . .	48 1 0	171 5 0	26 4 0	.....

NOTE.—5 per cent. Duty imposed, 1st April 1929.



## SCHEDULE 4—concl'd.

	British.		Continental.		Rs. A. P.
	7/064 Taped and Braided Cable.	7/064 Twin Lead Covered Cable.	7/064 Taped and Braided Cable.	7/064 Twin Lead Covered Cable.	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1930.					
C.i.f. Price . . . . .	34 7 0	123 4 0	18 4 6	.....	.....
Duty . . . . .	1 12 0	6 3 0	0 14 7	.....	.....
Landing and Clearing Charges . . . . .	0 5 7	1 4 0	0 2 8	.....	.....
<b>TOTAL</b> . . . . .	<b>36 8 7</b>	<b>130 11 0</b>	<b>19 5 9</b>	.....	.....
Approximate Selling Price . . . . .	45 5 0	151 3 0	25 8 0	.....	.....
1931.					
C.i.f. Price . . . . .	34 7 0	104 0 0	17 14 8	.....	.....
Duty . . . . .	1 12 0	5 3 2	0 14 4	.....	.....
Landing and Clearing Charges . . . . .	0 5 7	1 2 6	0 2 8	.....	.....
<b>TOTAL</b> . . . . .	<b>36 8 7</b>	<b>110 5 8</b>	<b>18 15 8</b>	.....	.....
Approximate Selling Price . . . . .	44 0 0	147 11 6	25 4 0	.....	.....

## SCHEDULE 5.

## RUBBER INSULATED GLAZED COTTON.

## Twin Twisted Flexibles.

(Prices in rupees per coil of 100 yards.)

	Cost of Importation.				Indian Cable Co.'s Selling Prices.	
	Continental.		British.			
	14/36 (35/40).	23/36 (70/40).	14/36.	23/36.	14/36.	23/36.
	Rs. A. P.	Rs. A. P.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
1925.						
C.i.f. Price . . . . .	6 10 0	8 0 0	11 14	14 3	...	...
Duty . . . . .	1 0 0	1 3 3	1 12	2 2	13 12	15 13
Landing and Clearing Charges . . . . .	0 1 9	0 1 9	0 2	0 2	...	...
<b>TOTAL</b> . . . . .	<b>7 11 9</b>	<b>9 5 0</b>	<b>13 12</b>	<b>16 7</b>	...	...

## SCHEDULE 5—contd.

	Cost of Importation.				Indian Cable Co.'s	
	Continental.		British.		Selling Prices.	
	14/36 (35/40).	23/36 (70/40).	14/36.	23/36.	14/36.	23/36.
	Rs. A. P.	Rs. A. P.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
<i>1926.</i>						
O.i.f. Price . . .	5 7 0	6 10 0	10 12	12 13	...	...
Duty . . .	0 13 6	0 15 6	1 8	1 12	11 8	12 6
Landing and Clearing Charges . . .	0 1 9	0 1 9	0 2	0 2	...	...
<b>TOTAL</b> . . .	<b>6 7 3</b>	<b>7 11 0</b>	<b>12 4</b>	<b>14 8</b>	<b>...</b>	<b>...</b>
<i>1927.</i>						
O.i.f. Price . . .	5 7 0	6 10 0	10 12	12 13	...	...
Duty . . .	0 13 6	0 15 6	1 9	1 14	11 8	12 6
Landing and Clearing Charges . . .	0 1 9	0 1 9	0 2	0 2	...	...
<b>TOTAL</b> . . .	<b>6 6 3</b>	<b>7 11 3</b>	<b>12 7</b>	<b>14 13</b>	<b>...</b>	<b>...</b>
<i>1928.</i>						
O.i.f. Price . . .	5 8 0	6 10 6	10 10	12 10	...	...
Duty . . .	0 13 6	0 15 6	1 8	1 12	11 8	12 6
Landing and Clearing Charges . . .	0 1 9	0 1 9	0 2	0 2	...	...
<b>TOTAL</b> . . .	<b>6 7 3</b>	<b>7 11 9</b>	<b>12 4</b>	<b>14 8</b>	<b>...</b>	<b>...</b>
<i>1929.</i>						
O.i.f. Price . . .	5 8 0	6 9 0	9 8	11 8	...	...
Duty . . .	0 13 6	0 15 3	1 7	1 12	17 2	20 2
Landing and Clearing Charges . . .	0 1 9	0 1 9	0 2	0 2	...	...
<b>TOTAL</b> . . .	<b>6 7 3</b>	<b>7 10 0</b>	<b>11 1</b>	<b>13 6</b>	<b>...</b>	<b>...</b>
<i>1930.</i>						
O.i.f. Price . . .	4 13 0	6 1 0	8 15	10 10	...	...
Duty . . .	0 11 9	0 14 6	1 6	1 8	16 0	13 13
Landing and Clearing Charges . . .	0 1 9	0 1 9	0 2	0 2	...	...
<b>TOTAL</b> . . .	<b>5 10 6</b>	<b>7 1 3</b>	<b>10 7</b>	<b>12 4</b>	<b>...</b>	<b>...</b>

## SCHEDULE 5—concl'd.

	Cost of Importation.				Indian Cable Cos'.	
	Continental.		British.		Selling Prices.	
	14/26.	23/36.	14/36.	23/36.	14/33.	23/36.
	(35/40).	(70/40).				
	Rs. A. P.	Rs. A. P.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
	1931.					
C.i.f. Price	4 0 0	5 0 0	8 8	10 4	...	...
Duty	0 12 0	1 0 0	1 12	2 1	15 7	13 2
Landing and Clearing Charges	0 1 9	0 1 9	0 2	0 2	...	...
TOTAL	4 14 0	6 1 9	10 6	12 7	...	...

NOTE.—Duty increased from 15 per cent. to 20 per cent. on 1st March 1931.

17. *Copper Wire not less than 1/80th sq. inch.*—On the same Wire Bar basis it is impossible for the Indian Cable Company to sell below the Importers landed cost.

*Rubber Insulated Cables.*—In the years 1926 to 1928 very severe price cutting amongst British manufacturers was adopted with the result that, the importations on which our figures are based appear to have been sold below the importers landed cost. At this time Indian Cables were also sold at below the cost of importation. Prejudice rendered it necessary (and does still) to quote figures below the price of British C. M. A. Cable.

Specific instances are:—

1/·044 Braided Cable—

	Rs. A. P.
1927—British Landed Cost	7 5 7
British Selling Price	5 8 0
Indian Cable Selling Price	4 12 0
1928—British Landed Cost	5 4 1
British Selling Price	4 8 0
Indian Cable Selling Price	4 0 0

During this period it was necessary for us to undersell British to an extent which, as the importer was either selling below landed cost or only slightly above it, brought our price below what we have given as the landed cost of British imported Cable. Such sales were invariably a loss and are reflected in the Statement of Profit (Question 22).

Since 1928 when British prices were raised no sales have been effected at below cost of importation.

18. We consider our Works to be quite large enough for economic production. If sufficient orders could be obtained to keep machinery in full production the factory could be considered almost an ideal size for cable and wire manufacture.

When manufacture commenced in 1923 the plant and equipment was the most up-to-date and efficient obtainable. Since that date very considerable advancement has taken place in regard to cable-making machinery in Europe. Where advantage of this development could be obtained by the modification of present machines, everything possible has been done. Where however, the scrapping of the present machine and substitution of a very costly one is involved, shortage of funds has precluded this improvement.

Generally with the exception of one or two machines we are still up-to-date. In some instances the more modern machine cannot be justified for its chief advantage lies either in increased production or a saving in labour. As regards the former our present machines are not fully occupied whilst the later advantage is not so great here as in other producing countries.

19. *Wire Mill.*—The copper is imported in the form of rod of various sizes from 0.250" diam. to 1.0" diam.

Rods are annealed and pickled to remove surface oxidation. Trolley wire and overhead hard drawn conductors larger than .324" diam. are drawn through steel dies in drafts suitable for the production of finished material of the requisite tensile strength. This is done on a single block rumping block.

Telegraph wire and wires exceeding .110" finished diameter are drawn on an 8 block wire drawing machine also through steel dies.

Smaller wires down to .062" diameter are drawn through chilled iron dies in 9 hole tandem machines.

Still smaller wires down to .004" diameter are drawn on 10-hole cone type wire drawing machines and 12-hole fine wire machines all through diamond dies.

If required for insulated cable manufacture the wires after drawing are annealed at varying temperatures and for varying times according to the size of wire. This annealing is done in sealed furnaces known as 'Bright annealing furnaces'.

When the insulation to be used is rubber, and therefore a sulphur containing material has to be adjacent to the conductor, the copper wires have to be tinned. Coils of annealed wire are cleaned, fluxed and run through a bath of molten tin so that a thin film of tin is formed on the surface of the wire.

*Cable Departments—Conductors.*—The tinned copper wires received from the Wire Mill are wound on metal reels. If the cables to be manufactured are to have conductors larger than .003 sq. inch a number of wires are stranded together for the sake of flexibility.

The manufacture of stranded conductors is carried in several types of stranding machines according to the size of wires and strands required. Successive layers of wires are applied in opposite directions round a centre single wire. For sizes .002 and .003 sq. inch three wires are stranded together in high speed machines.

When a high degree of flexibility is required a large number of fine wires are bunched together without any definite geometrical formation.

*Insulation.*—The raw rubber is received from the plantation in Southern India in a sufficiently clean state to enable it to be used directly into the mixing mills after only a surface picking.

The raw rubber is mixed with various powders such as French chalk, Zinc white, Zinc oxide, Carbon black, Magnesium Carbonate, etc., whose purposes are to assist vulcanisation, to colour, to give body, to increase insulation resistance, etc. Sulphur is also added to effect vulcanisation. This mixing is carried out in a mixing mill consisting of two horizontal rolls placed side by side and rotating at different speeds to give a mixing effect. After a thorough mixing the compounded rubber leaves the mill as a plastic dough. In this form it is ready for use in an extrusion machine or if for use in the longitudinal or lapping machines, the compound is fed into a calender which consists of three horizontal rolls placed one above the other. The rolls are set at a certain distance apart. After feeding between the top pair of rolls and guiding round through the bottom pair the rubber comes from the machine in a long sheet approximately 36 inches wide and of the thickness required for application to the conductors.

The application of the rubber, or the rubber covering of the conductors, is carried out in three methods, *i.e.*, longitudinal, lapping and extrusion.

In the longitudinal method the rubber is applied in three layers, being pressed on by grooved rollers. The lapping method is used for large conductors and three layers of rubber are spirally lapped on. The extrusion method is little used for insulation. It consists of a worm screw forcing rubber on to the conductor through a die.

Cables insulated by the longitudinal and lapping method are covered with a calico tape rubber proofed on one side and applied spirally. In this form the cables are subjected to a temperature of 290°F. and vulcanised. The cables covered by the extrusion method are wound into trays containing French chalk and also vulcanised.

After vulcanisation all cables are tested after immersion in water for 24 hours. The tests consists of a high voltage straining, the measurement of insulation and conductor resistances, and the gauging of the conductor and insulation.

*Protective Material.*—The insulated cables have now to have one or more of the following protective finishes applied:—

- (1) Braiding with cotton or jute and impregnated with weatherproof compounds.
- (2) Tough rubber sheathing (C. T. S.).
- (3) Lead or lead-alloy sheathing.
- (4) Armouring in one or two layers with galvanised steel wires.
- (5) Braided with artificial silk or glazed cotton in various colours.

The type of protective finish varies according to the conditions likely to be experienced by the cable during service.

The braiding, whether it be cotton, jute, glazed cotton or silk, is applied by passing the cables through a machine where bobbins carrying the braiding material plait around it a close braid making a neat and very tight covering. The cotton and jute braided cables are then passed through baths of preservative and polishing compounds which are retained in a molten condition with steam heating.

Tough rubber sheathing (C. T. S.) is applied in a plastic state on an extrusion machine, afterwards being vulcanised in trays of French chalk.

Lead and lead-alloy sheathings are applied by a hydraulic press which forces the metal in a plastic but not molten state, through an annular space between a core and die, this forming a tube of metal over the insulated conductor or conductors.

Cables are armoured by the laying of galvanised iron or steel wires around the cable and on a bedding of jute that has previously been applied. Armoured cables are either left bare or served with a layer of jute which is afterwards weatherproof compounded.

*Multicore Cables.*—Cables with two or more separate insulated conductors are "laid-up" with jute, cotton or other suitable filling, either before or after the preservative coverings are applied.

*Instrument Wires.*—These are manufactured by the spinning of very fine cotton or silk threads around annealed copper wires which have to be of extremely accurate diameters.

20. Present Block Value of Company's property—

	Balance Sheet Valua- tion 31st March 1930.	If fully depreciated it would have been
	Rs.	Rs.
Factory Building . . . . .	5,46,401	4,74,032
Residential Quarters . . . . .	80,353	78,090
Machinery, Non-Electrical . . . . .	9,38,715	8,21,199
Machinery, Electrical . . . . .	84,570	66,789
Electrical Installation . . . . .	40,522	28,386
Furniture . . . . .	17,023	15,509
Transport . . . . .	8,501	7,117
Railway Siding . . . . .	2,100	1,838
	<u>17,18,190</u>	<u>16,92,960</u>

## 21. Estimated cost to construct at the present time—

	Rs.
Factory Building . . . . .	3,00,000
Residential Quarters . . . . .	60,000
Machinery, Non-Electrical . . . . .	10,00,000
Machinery, Electrical . . . . .	90,000
Electrical Installation . . . . .	30,000
Furniture . . . . .	15,000
Transport . . . . .	7,000
Railway Siding . . . . .	3,000
	15,05,000

## 22. Profit or Loss per year since commencement of manufacture showing allocation; and showing arrear of depreciation at end of each year—

Financial year.	Profit or	Depreciation	Preliminary	Reserve for	Arrear of
	Loss.	written-off.	Expenses,	deprecia-	deprecia-
	Rs.	Tools and	brokerage and	tion of	tion of
		Implements.	commission.	block.	block.
	Rs.	Rs.	Rs.	Rs.	Rs.
1923-24 .	76,958	1,037	Nil	51,331	Nil
1924-25 .	3,844	236	1,717	Nil	1,05,615
1925-26 .	59,142	920	32,622	Nil	2,13,710
1926-27 .	51,569	2,619	Nil	Nil	3,23,520
1927-28 .	42,571	1,361	Nil	1,06,033	3,27,793
1928-29 .	2,73,874	Nil	12,237	1,10,215	3,28,055
1929-30 .	2,28,742	Nil	8,487	2,16,517	2,25,230
1930-31 .	*1,00,000	Nil	Nil	Nil	3,39,299

NOTE.—It will be observed that with the exception of a comparatively small sum used to eliminate Preliminary Expenses, Brokerage, etc., the profit earned to date has been placed to reserve for depreciation. As the profit for several years was insufficient to cover depreciation the arrear have been partially met by larger contributions in subsequent years. At March 31st, 1931, Rs. 3,39,299 still remains to be written-off the assets to bring the depreciation fund up to the figure at which it would have stood had full depreciation been written-off each year since the commencement of manufacture.

The shareholders have had no return on their investments since the inception of the Company.

## 23. Attached hereto are the following forms:—

Form I.—Total Expenditure incurred at Works.

Form II.—Works Cost per 100 yards of rubber insulated cable of a typical class and size not less than 1/80th square inch.

Form III.—Works Cost per hundredweight of bare copper conductor of a typical class and size not less than 1/80th square inch.

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\* Estimated.

## FORM I.

## Total Expenditure incurred at Works.

	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.	Rs.	Rs.
1. Copper rod . . .	10,30,845	10,36,609	18,73,023	13,40,948	10,15,528
2. Other materials—					
(a) Aluminium rod . . . . .	.....	.....	.....	3,010	43,072
(b) Tin . . . . .	6,914	8,625	11,854	12,964	5,441
(c) Sulphuric acid . . . . .	1,221	637	1,018	1,106	608
(d) Soft Soap . . . . .	538	1,094	1,375	1,156	1,337
(e) Pig lead . . . . .	46,489	43,340	61,255	64,505	61,572
(f) Mag. carbonate . . . . .	2,321	9,344	1,189	6,672	1,543
(g) Rubber . . . . .	20,059	69,890	65,681	70,624	35,417
(h) Sulphur . . . . .	271	760	295	585	377
(i) Wax paraffin . . . . .	74	855	461	1,951	1,565
(j) Wax cable . . . . .	2,428	9,361	12,101	16,221	10,528
(k) Zinc oxide . . . . .	297	961	3,242	3,419	2,197
(l) Zinc white . . . . .	229	376	712	2,354	10,302
(m) Calico . . . . .	15,280	14,000	16,721	49,828	12,857
(n) Cotton . . . . .	27,350	28,339	28,176	44,137	23,841
(o) French chalk . . . . .	1,940	2,535	2,425	2,989	4,355
(p) Jute . . . . .	1,179	4,657	4,829	4,330	3,586
(q) Miscellaneous . . . . .	13,224	21,174	29,541	38,880	32,166
3. Labour . . . . .	75,367	87,538	1,27,868	1,20,030	1,11,140
4. Water . . . . .	3,304	4,464	3,631	5,766	5,286
5. Power and fuel . . . . .	22,606	30,570	44,454	42,390	35,401
6. Repairs and maintenance . . . . .	57,913	38,447	50,992	58,565	49,280
7. Supervision and office establishment . . . . .	33,993	35,688	47,806	33,791	36,588
8. Packing . . . . .	43,727	47,487	93,391	61,324	70,353
9. Miscellaneous . . . . .	23,292	25,711	27,410	29,361	27,920
<b>TOTAL</b> . . . . .	<b>14,30,861</b>	<b>15,32,462</b>	<b>25,09,350</b>	<b>20,16,906</b>	<b>16,02,260</b>

## Total Output—

	Tons.	Tons.	Tons.	Tons.	Tons.
Copper Wire . . . . .	330.5	512.5	722.5	312.5	330.7
Telegraph Copper Wire . . . . .	441.8	525.6	784.0	405.3	541.8
<b>TOTAL</b> . . . . .	<b>772.3</b>	<b>1,038.1</b>	<b>1,506.5</b>	<b>717.8</b>	<b>872.5</b>
Aluminium Wire . . . . .	.....	.....	.....	2.5	13.1

*Note regarding Cables.*—There is no basis on which the quantity can be given intelligibly. In one year a large proportion of multi-conductor cables was made, in another practically none. Again there are four principal classes of cable each made in ten to twenty-six sizes and four to twelve different finishes.

## FORM II.

*Works cost per 100 yards of rubber insulated cable of a typical class and size not less than 1/80th square inch.*

Actual size taken—7/064 taped, braided and compounded cable.

	1926-27.		1927-28.		1928-29.		1929-30.		1930-31.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
1. Copper	14	11 0	12	9 9	14	2 9	16	2 6	11	2 10
2. Other materials—										
Rubber	6	9 11	6	0 6	3	0 0	3	4 0	1	14 7
Powders	0	11 9	0	11 6	0	11 3	0	10 8	0	9 11
Waxes	0	12 10	0	10 6	0	10 9	0	10 6	0	9 7
Calico	2	8 10	2	4 8	2	3 7	1	14 3	1	12 9
Cotton	1	11 3	1	9 2	1	12 2	1	14 1	1	10 9
Tin	1	0 10	0	12 0	0	10 4	0	10 5	0	7 6
Miscellaneous	0	6 5	0	6 5	0	6 2	0	6 2	0	6 0
3. Labour	2	2 5	2	0 3	1	15 9	1	13 2	1	12 10
4. Water	0	0 8	0	0 11	0	0 5	0	0 8	0	0 7
5. Power and fuel	0	12 2	1	0 2	0	12 8	0	13 0	0	10 3
6. Repairs and maintenance	2	0 1	1	4 2	1	0 0	1	3 2	0	15 9
7. Supervision and office establishment	1	0 2	1	2 3	0	13 2	0	11 3	0	10 7
8. Packing	0	9 10	0	9 11	0	9 5	0	9 3	0	8 3
9. Miscellaneous	0	12 10	0	13 10	0	9 11	0	10 1	0	9 7

*Total Output of Rubber Insulated Cables.*

NOTE.—There is no basis on which the quantity can be given intelligibly. In one year a large proportion of multi-conductor cables was made, in another practically none. Again there are four principal classes of cable each made in ten to twenty-six sizes and four to twelve different finishes.

## FORM III.

*Works cost per cwt. of bare copper conductor of a typical class and size not less than 1/80th square inch.*

Actual size taken—No. 10-S. W. G. (.128" dia.) hard drawn copper wire.

	1926-27.		1927-28.		1928-29.		1929-30.		1930-31.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
1. Copper rod	57	6 6	52	2 4	53	1 8	62	0 6	37	5 11
2. Other materials—										
Acid	0	6 3	0	6 1	0	5 8	0	5 4	0	2 2
Oils	0	0 3	0	0 3	0	0 2	0	0 2	0	0 2
Miscellaneous	0	0 4	0	0 4	0	0 3	0	0 3	0	0 3
3. Labour	1	15 10	1	5 7	1	1 9	1	4 11	1	4 1
4. Water	0	2 1	0	2 6	0	1 6	0	3 0	0	2 3
5. Power and fuel	0	7 8	0	9 5	0	7 6	0	9 8	0	7 11



## FORM III—contd.

	1926-27.		1927-28.		1928-29.		1929-30.		1930-31.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
6. Repairs and maintenance . . . . .	1	0 9	0	10 4	0	8 2	0	14 10	0	9 0
7. Supervision and office establishment . . . . .	0	13 4	0	12 9	0	9 11	0	10 10	0	9 7
8. Packing . . . . .	0	8 8	0	8 8	0	7 10	0	6 4	0	6 4
9. Miscellaneous . . . . .	0	7 10	0	8 2	0	4 11	0	8 3	0	5 11
					Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Total output of bare copper conductors (not including Telegraph wires) . . . . .			306.8		478.7		677.1		275.8	295.9

24. The following are the rates allowable and we consider them suitable:—

	Per cent.
Factory Buildings . . . . .	5
Residential Quarters . . . . .	2½
Machinery, Non-Electrical . . . . .	5
Machinery, Electrical . . . . .	7½
Electrical Installation . . . . .	7½
Furniture . . . . .	5
Transport . . . . .	20
Railway Siding . . . . .	10

On this basis the annual sum to be set aside for depreciation is Rs. 1,15,000.

25. The working capital required by the Company—

- (a) On the present output—Rs. 8 lakhs.  
 (b) Factory on full output—Rs. 12 lakhs.

The former figure is based on actual experience. The latter is estimated on the basis that our outstandings; credit and debit, would balance each other as at present and our stocks would have to be increased in value by 50 per cent.

26. Average stocks, based on 1930, held by us—

	Value.
	Rs.
(a) Copper . . . . .	93,000
Rubber . . . . .	8,500
Miscellaneous Raw Materials . . . . .	1,12,500
Semi-manufactured goods . . . . .	1,00,000
Coal . . . . .	1,000
(b) Average outstanding based on 1930 . . . . .	4,30,000

27. (a) In 1930, Rs. 66,000 per annum.

NOTE.—From 1922 to 1927, five years, during the period of construction and subsequently when manufacture commenced the Managing Agents waived this charge altogether.

(b) Rs. 24,000 per annum.

NOTE.—From 1922 to 1927, five years, the Managing Agents accepted half the sum to which they were entitled, i.e., Rs. 12,000 per annum. Further, from 1922 to 1925, three years, the Managing Agents supplied Raw materials

at current market rates and allowed the Company unlimited credit free of interest.

23. The Directors have decided that some change in the scope of protection suggested in their letter of July 10th, 1929, is now necessary and that assistance is essential in regard to the following commodities.

(a) *Flexible Cords*.—Twin Twisted Glazed Cotton or Silk Flexibles of sizes 14/36 (or 35/40) and 23/36 (or 70/40) S.W.G. These are dumped by the Continent in large quantities at very low prices. The quality varies but is generally much below the standard we have endeavoured to maintain and is below the standard put forward by British manufacturers for the same work.

We have requested that the import into India of this material, as well as low grade cable, is not allowed unless it will pass certain prescribed tests. In the event of this not being feasible we suggest that a specific duty is applied which will result in the inferior article bearing the same import duty as the higher grade, and therefore more costly article with which it competes. The specific duties suggested are given in the Schedule No. 1 attached

So far severe competition is confined to the Twin Twisted Glazed Cotton or Silk Braided Flexibles and as these are standard in the Indian market we do not anticipate that the duty would be evaded by altering the "make up" of the article.

(b) *Rubber Insulated Cables less than 1/80th square inch*.—When our representation was made in July, 1929, Continental competition was severe in a limited number of sizes of both braided and lead covered cables. Since that date price cutting has been extended until this covers the whole range of popular sizes of braided and lead covered cables.

These cables are sold at prices from 55 per cent. to 62 per cent. below the market rate of British. Our difficulty is that whereas British C.M.A. cable has a reputation and a steady market on this account Indian cable is expected (by private users) to compete with Non-British, i.e., Continental of the most inferior type. It is our intention to earn for "Indian Cables" a reputation equal to that possessed by British Cables and to this end have manufactured cable of a higher standard than the best imported. It follows that the cost of this cable renders it impossible to compete with prices quoted for an article which is not comparable in quality and we are faced (so far as the general consumer is concerned) with the alternative of either reducing our quality and price for foregoing any share of this business. Up to the present we have avoided any reduction in quality as to do so, in our estimation, will confirm the prejudiced opinion of the average Indian buyer that cable made in India cannot be equal to British and must therefore be sold at the prices ruling for the inferior qualities available.

There may be serious difficulties in limiting the standard of cable admissible into India. If the low grade article (and it is so low as to be unsafe in use) could be eliminated we could make more headway. If importation cannot be stopped, we suggest again a specific duty based on the duty now paid on the high grade cable as a means of increasing the cost of the inferior article and reducing the consumption.

The specific duties suggested are given in the attached Schedule No. 2 and you will observe that these cover sizes less than 1/80th square inch in addition to some sizes not less than 1/80th square inch in cross sectional area.

*Rubber Insulated Cables over 1/80th square inch*.—If the specific duty referred to in the previous paragraph is acceptable the Company would withdraw its application for an increase in the import duty on cables over 1/80th square inch. Some protection in addition to the 5 per cent. now levied to adjust the Tariff inequality which formerly existed, is necessary to help the industry against the rapidly increasing Continental competition. A specific duty would have the effect of reducing in some degree, the difference in the cost of high and low grade material by increasing the latter and as "Indian Cables" are expected to compete with the cheapest article of its kind more business would be diverted.

The price at which British cable is sold is not unremunerative to the Indian Cable Company and it is doubtful on the selling prices at present in force for this cable whether the Company could justify their further enhancement by a general increase in the Import Tariff on all Rubber Insulated Cables.

If a general increase in duty is the only means of assisting the industry to obtain a larger percentage of the business in Cables over 1/80th square inch the Company requests that this assistance is given to it.

(c) *Uninsulated Conductors*.—In common with manufactures of wire we have to exist on the difference between the basic price of the metal and that of the finished wire. The schedule relating to bare copper wires furnished in reply to question No. 15 will indicate that when the Indian Cable Company first came into the field, there was quite a good margin between the cost and the usual selling price. As their business increased this margin became less. At first this was due to a reduction in the profit retained by the seller in India. Later the 2½ per cent. import duty on machinery was abolished (October 1927) and as uninsulated conductors are included in this category they were affected. Subsequently the foreign manufacturers, addition to the basic price was reduced and this price cutting has continued until at the present time our competitors import finished wire packed in coils wrapped in hessian at a figure very little above the best price at which we can obtain our raw material which is shipped loose. It is clear that this is done to cripple this side of our business and presumably when our production ceases prices will revert to their former remunerative level.

Another factor which adversely affects our business is the importation of bare wires which are not manufactured to a specification. All wires produced by us are to British Engineering Standard Specification and each coil has stamped upon it "Guaranteed to B. E. S. A.", "The Indian Cable Company, Limited".

To manufacture to this specification increases our cost as full automatic working is not possible, whereas the imported article may be drawn on automatic machines and shipped to India without any guarantee as to breaking strain, conductivity, etc. It is in our interests to manufacture to a definite standard if our goods are to earn a reputation and generally amongst Engineers the difference between wire to B. E. S. A. standard and wire to no standard at all is appreciated. Wire is, however, bought in large quantities by people to whom price is the only consideration and in these cases, as we will not reduce the quality we lose the business. That the inferior wire is dangerous to life (owing to the liability to breakage) and that considerable loss to the user results when the electrical resistance is excessive carries no weight with the uneducated buyer.

There is still one other disadvantage an industry of this kind has to contend with until its raw materials are obtainable in India. Heavy stocks of copper have to be carried at the factory and supplies must come forward steadily. In competition with wire held in competitors stock the position is not nearly so acute as in the case where a buyer asks for prices for a specific quantity for forward delivery from America, Europe or Japan. In the former case the stockist covers for loss of interest on the money locked up, in the latter case the price quoted is regulated more by the anxiety to obtain the work for the foreign factory than by any other consideration and frequently results in a price with which no Indian industry could compete. This difficulty will be overcome when indigenous material is available. We have struggled since 1923 and there is every probability that without assistance the copper wire drawing industry will disappear before the semi-manufactured raw material becomes available.

It is not possible for ourselves or any one else in India to produce this material profitably in existing conditions, hence our request that our case in this connection be given full and sympathetic consideration.

In 1929 we suggested an import duty of 10 per cent. At that time the basic price of Electrolytic Wire Bars was £85 per ton and the c.i.f. price

of wire approximately Rs. 65 per cwt. The E. W. B. rate is now £37 per ton, and the c.i.f. price of wire approximately Rs. 31 per cwt. so that whereas 10 per cent. in 1929 would have given us protection to the extent of Rs. 6-8 per cwt. it would now only amount to Rs. 3-2 per cwt. For this reason we ask for 20 per cent. *ad valorem* import duty or alternatively a specific duty of Rs. 6-8 per cwt. on uninsulated copper wire and strand and 20 per cent. *ad valorem* duty on other uninsulated conductors and weatherproof braided aerial wires and cables over 1/80th square inch in area.

*Suggested specific duty on flexibles.*

SCHEDULE 1.

Size.	Glazed Cotton Braided Twin Twisted Flexible.	Silk Braided Twin Twisted Flexible.	Workshop Round Twin Flexible.	Round Twin C. T. S. Flexible.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
	14/36 } 35/40 }	3 0 0	4 0 0	2 12 0
11/012 . . .	...	...	...	4 14 0
23/36 } 70/40 }	3 2 0	5 0 0	3 3 0	5 5 0
16/012 . . .	...	...	...	5 9 0

*Suggested specific duty on cables.*

SCHEDULE 2.

Size.	Braided Single.	Lead or Metal Alloy Single.	Lead or Metal Alloy Flat Twin.	Lead or Metal Alloy 3 core.	Single C. T. S.	Round or Flat Twin C. T. S.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
	1/036 . . .	0 14 0	2 8 0	3 13 0	...	2 0 0
1/044 . . .	0 15 0	2 10 0	4 2 0	5 13 0	2 2 0	4 0 0
3/029 . . .	1 0 0	2 11 0	4 12 0	6 8 0	2 4 0	4 10 0
1/064 . . .	1 8 0	2 13 0	5 5 0	7 2 0	2 8 0	5 2 0
3/036 . . .	1 11 0	3 2 0	5 8 0	8 4 0	2 10 0	5 3 0
7/029 . . .	2 0 0	4 0 0	7 4 0	...	3 6 0	6 14 0
7/036 . . .	2 12 0	4 13 0	8 0 0	...	3 10 0	7 8 0
7/044 . . .	3 12 0	5 9 9	10 0 0	...	4 10 0	9 4 0
7/052 . . .	4 4 0	...	...	...	...	...
7/064 . . .	6 8 0	...	...	...	...	...
19/052 . . .	12 14 0	...	...	...	...	...
19/064 . . .	16 12 0	...	...	...	...	...

29. (a) Increase in cost of mains due to 20 per cent. import duty on uninsulated conductors—

*Basis.*—Based on the c.i.f. price of wire at the time the lines referred to below were designed, we find that the conductors cost from 22 per cent. to 30 per cent. of total expended on over-head mains. We have taken the higher figure of 30 per cent. At that time the basis price of copper was in the neighbourhood of £84 per ton it is now £36-17-6 so that the effect of the duty has to be reduced in this ratio.

*Example 1.—Hydro-Electric Scheme—*

Total cost of the entire Scheme . . . . . Rs. 1,45,00,000

	Rs.
Cost of Mains . . . . .	24,42,938
Cost of Services . . . . .	10,00,000
	34,42,938

Cost of Conductors 30 per cent. of Rs. 34,42,938 = Rs. 10,32,881.  
 20 per cent. of Rs. 10,32,881 = Rs. 2,06,576 extra capital involved, i.e.,  
 1.424 per cent. of the cost of the scheme.

NOTE.—The conductors are of Aluminium and are not therefore affected by the drop in price of copper.

*Example 2.—Public Supply Co. (Benares Electric Light & Power Co.)—*

Total Block expenditure . . . . . Rs. 21,61,240

	Rs.
Cost of Mains . . . . .	3,96,463
Cost of Services . . . . .	97,120
	4,93,583

Less estimated cost of underground cables say 10 per cent. . . . .	49,358
	4,44,225

Cost of Conductors 30 per cent. of Rs. 4,44,225 = Rs. 1,33,267.  
 20 per cent. of Rs. 1,33,267 = Rs. 26,653 extra capital involved, i.e.,  
 1.233 per cent. on the entire undertaking.

*Example 3.—Public Supply Co. (Patna Electric Supply Co., Ltd.)—*

Total Block expenditure . . . . . Rs. 17,94,181

	Rs.
Total cost of Mains . . . . .	5,70,807
Less underground cables 10 per cent. . . . .	57,080
	5,13,727

Cost of Conductors 30 per cent. of Rs. 5,13,727 = Rs. 1,54,118.  
 20 per cent. of Rs. 1,54,118 = Rs. 30,823 extra capital involved, i.e.,  
 1.727 per cent. on the entire undertaking.

*(b) Increased cost of current consequent on increased Import Duty—*

*Example 1.*—Assuming increased capital cost 5 per cent. interest, whilst depreciation and maintenance were taken at 5 per cent. of the asset (an outside figure) Revenue would have to provide 10 per cent. of Rs. 2,06,576 = Rs. 20,657.

The estimated annual revenue is Rs. 25,00,000 so that the cost of current would have to be enhanced by .8026 per cent. or on 3,50,00,000 Units .000944 anna per unit.

*Example 2.*—Assuming that Revenue had to provide 15 per cent. on the increased Capital Rs. 26,653, i.e., Rs. 3,997. Present earnings amount to Rs. 1,85,000 so that Rs. 3,997 represents an increase of 2.16 per cent. This undertaking is not fully developed, the annual consumption is 18,00,000 Units; 30,00,000 could be sold without further outlay, therefore 25,00,000 is a fair figure and Rs. 3,997 spread over 25,00,000 Units represents an increase of .0255 anna per unit.

*Example 3.*—Assuming again 15 per cent. on the increased capital (Rs. 30,823) Revenue must find Rs. 4,623 an increase of .917 per cent. on Rs. 5,04,000 or on 32,91,203 units .0224 anna per unit.

Taking the present cost of uninsulated conductors the above calculations become to-day—as £37 is to £84, i.e.:—

	Percentage increase in Revenue necessary to compensate for enhanced duty.	Increase in annas per Unit.
Example 2 . . . . .	.951%	.0112 anna.
Example 3 . . . . .	.403%	.0098 „

Very small quantities of Rubber Insulated Cables are used by Supply Companies or Municipalities and the value would be insufficient to materially affect the issue. The value would not exceed 1 per cent. of the value of the uninsulated conductors referred to above.

30. (a) Our proposals would in no way affect the price of Telephone or Telegraph Cables. These are all less than 1/80th square inch in cross sectional area and are therefore, at present subject to 20 per cent. import duty.

(b) Our proposals would only affect one class of Telegraph or Telephone Wire, i.e., 300 lbs. per mile. From our records other sizes not less than 1/80th square inch in cross sectional area, are not employed.

During the five years 1926-1931 the consumption of 300 lb. wire averaged 139 tons per annum. At to-day's rate 20 per cent. duty would amount to approximately Rs. 136 per ton=Rs. 18,904 per year.

(5) Letter No. L. T. 1/30025/C., dated the 15th July, 1931, to the Tariff Board.

In further reference to our letter of June 30th, we have pleasure in forwarding herewith (with 5 spare copies) a statement we have prepared showing the progressive reduction in the price of No. 10, S. W. G. Copper wire since this Company was floated in 1920.

It will be observed that in 1923 the import duty was reduced from 15 per cent. to 2½ per cent. *ad valorem*. At the close of 1924 the rate of exchange was altered from 1s. 4d. to 1s. 6d. per rupee and in October, 1928, the remaining 2½ per cent. import duty was removed. At the same time the manufacturers charge for manufacture, packing and shipping was reduced from £4-14-0 per cwt. to £4-8-9 and the c.i.f. cost has dropped from Rs. 81-5-3 to Rs. 59-6-3 in the period under review.

All the figures are calculated on the same metal basis to indicate the effect of factors quite apart from the market fluctuation of electrolytic copper.

Enclosure:

## COPPER WIRE.

Statement of variations which have taken place in trading conditions since flotation of this Company in 1920.

Taking a fixed rate for E. W. B. throughout.

	Wire per		Rate of		Value in		Import		L. and C.		Landed								
	owt.		Exchange.		Currency.		Duty		charges.		Cost.								
	c.i.f.						Rate												
	£	s.	d.	£	s.	d.	Rs.	A.	P.	Rs.	A.	P.							
1920 . . . . .	4	14	0	1	4	70	8	0	15%	10	9	3	4	0	81	5	3		
1922 . . . . .	4	13	6	1	4	70	2	0	„	10	8	3	4	0	80	14	3		
1923—																			
January to March	4	13	0	1	4	60	12	0	„	10	7	6	3	9	80	7	3		
April to December	4	13	0	1	4	60	12	0	2½%	1	12	0	3	9	71	11	9		
1924 . . . . .	4	12	0	1	4	60	0	0	„	1	11	6	3	7	70	15	1		
1925 . . . . .	4	12	0	1	6	61	5	4	„	1	8	6	3	7	63	1	5		
1926 . . . . .	4	11	0	1	6	60	10	8	„	1	8	3	3	7	62	6	6		
1927—																			
January to																			
September	4	10	6	1	6	60	5	4	„	1	8	0	3	7	62	0	11		
October to Decem-																			
ber	4	10	6	1	6	60	5	4	Nil	...					3	7	60	8	11
1928 . . . . .	4	10	0	1	6	60	0	0	„	...					3	7	60	3	7
1929 . . . . .	4	9	6	1	6	59	10	8	„	...					3	7	59	14	3
1930 . . . . .	4	9	0	1	6	59	5	4	„	...					3	7	59	8	11
1931 . . . . .	4	8	9	1	6	59	2	8	„	...					3	7	59	6	3

(6) Letter No. L. T. 1/30204/C., dated the 20th July, 1931, to the Tariff Board.

With further reference to our letter of the 30th June, we send you herewith a statement showing the allocation of Shares of this Company from the year 1920 to date.

Will you please attach this as an appendix to our answer to Question 1?

Enclosure.

## Share Capital.

	Ordinary.	
	Indian.	Non-Indian.
1920-21 . . . . .	89,228	56,007
1922-23 . . . . .	78,148	57,707*
1923-24 . . . . .	...	...
1925-26 . . . . .	...	...
1926-27 . . . . .	63,815	72,415
1927-28 . . . . .	60,615	74,615
1928-29 . . . . .	59,865	75,365
1929-30 . . . . .	56,560	78,670
1930-31 . . . . .	56,160	79,070

\* Shares forfeited at Directors Meeting of 11th June, 1923—

Indian.	Non-Indian.
7,380	2,000

(7) Letter No. 422/C. 4, dated the 8th July, 1931, from the Tariff Board, to The Indian Cable Company, Limited, Calcutta.

With reference to your letter No. L. T. 1/29540/C., dated the 30th June, 1931, I am directed to say that the Board would be glad if you would furnish certain further information. To facilitate reply I have put the various points in the form of a supplementary questionnaire.

(1) Please send a copy of your balance sheet for each of the years 1928-29, 1929-30, 1930-31. If the balance sheet for 1930-31 is not yet published please send a copy as soon as it is ready for the confidential use of the Board.

(2) With reference to your reply to Question 2 of the Board's Questionnaire—

(a) Please state whether the values given represent actual realised prices or estimated realisations. In either case please also state whether they represent nett prices *ex-works* or gross prices, *i.e.*, before deducting selling expenses, discounts, commissions, freight, etc.

(b) Please prepare a statement under the same heads (a) (i) and (ii), (b) (i) and (ii) and (c) (i) and (ii) showing the actual nett prices realised *ex-works* for your output of 1930-31. In the event of the output of 1930-31, not having been completely sold the remainder of that output still held in stock should be valued according to the average *ex-works* nett price realised in 1930-31, for each of the classes of wires and cables mentioned above. If the values for 1930-31, given in your reply to Question 2 represent actual realisations *plus* an estimate of the price to be obtained for the remainder of the 1930-31, output calculated on this basis this statement need not be prepared but the fact that the figures have been so calculated may be stated.

(3) With reference to your reply to Question 20, please state—

(a) the original block value of your property, *i.e.*, before any depreciation was written off,

(b) the approximate dates when the plant and machinery were purchased and erected and the buildings were constructed.

(4) With reference to Form I in your reply to Question 23, do you expect in the near future any further economies in the expenditure at works, apart from economies arising from an increased output? If so, please state—

(a) the items under which reductions are expected,

(b) the probable extent of the reduction under each item and

(c) the grounds on which reductions are anticipated.

(5) With reference to your reply to Question 25, how much of the working capital required by the Company on the present output was it necessary for you to borrow in 1930-31, and at what rate of interest?

I am to ask that the reply to this letter together with 5 spare copies may be sent as early as possible and not later than the 1st August, next. It should be addressed to the Secretary, Indian Tariff Board, 1, Council House Street, Calcutta.

(8) Letter No. L. T. 1/30633/C., dated the 30th July, 1931.

Further to our letter No. L. T. 1/29540/C., of 30th June, and in reply to your letter of 8th instant, we now have pleasure in sending you herewith the supplementary information asked for.



Six copies of the published Balance Sheets\* of the Company for the years 1928-29, and 1929-30, together with six copies of the unpublished Trading and Profit and Loss accounts\* of the Company for the same periods are included.

The Balance Sheet for 1930-31, has not yet been prepared by our Auditors. Six copies of a rough Balance Sheet together with Trading and Profit and Loss accounts for this period prepared by ourselves are included.

It is noted that the Balance Sheet for 1930-31, will be treated as confidential. Will you also kindly treat the unpublished Trading and Profit and Loss accounts for the years 1928-29 and 1929-30, in the same way.

Our replies to questions 2, 3, 4 and 5 are detailed on the attached sheets.

\* Not printed.

Enclosure.

Replies to questions in letter from the Tariff Board, dated the 8th July, 1931.

(2) (a) The values given in our answer to Question 2 of the Questionnaire represent actual prices realised after deducting discounts and Agents commissions only. In the case of (a) (i) and (a) (ii) the values given are actual sales for the financial year. In the case of (b) (i) and (b) (ii) and (c) (i) and (c) (ii) the values given are prices realised for the works output only during the year.

		1930-31.		
		Gross Value of Sales.	Less Stock Difference.	Estimated prices realised* ex-works.
(a)	(i)	6,37,200	31,650	5,83,553
	(ii)	3,34,295	9,965	3,01,970
(b)	(i)	42,385	Nil	41,395
	(ii)	2,66,310	Nil	2,56,690
(c)	(i)	4,09,200	Nil	3,97,444
	(ii)	2,47,230	Nil	2,38,664
	Rs.	19,36,630	...	...
<i>Less Stock</i>				
	Difference	41,615	...	...
	Rs.	18,95,015	...	...
<i>Less Selling Charges, etc.</i>				
		75,299	...	...
	Rs.	18,19,716	...	18,19,716

\* Figures given in reply to Question 2 of Questionnaire submitted on 30th June, were in the case of cables actual Gross sales after deducting discounts and agents commission only. All other selling charges such as packing, putting on rail, Railway freight, repacking at stock depôts and despatching to destination were included. In column 3 we give the figure realised ex-Works after deducting all charges incurred on finished goods.

(S) (a) The Original Block value of our property before writing off depreciation was on 31st March, 1924:—

	Rs.
Buildings . . . . .	7,15,476
Machinery and Plant . . . . .	10,76,802
Furniture . . . . .	13,174
Electrical Installation . . . . .	29,150
Transport . . . . .	4,150
	Rs. . 18,38,752

The total Block Expenditure to 31st March, 1930, ignoring deductions for depreciation is:—

	Rs.
Factory Building . . . . .	7,22,467
Residential Quarters . . . . .	93,748
Machinery Non-Electrical . . . . .	11,66,995
Machinery Electrical . . . . .	1,21,967
Electrical Installation . . . . .	53,480
Furniture . . . . .	22,424
Transport . . . . .	18,581
Railway Siding . . . . .	2,624
	Rs. . 22,02,286

(b) The majority of the plant and machinery was purchased and erected and the buildings constructed in the financial years 1922-23 and 1923-24.

(4) We consider it impossible for us to effect further economies in the Works Expenditure while present conditions continue.

Economies will of course result from increased turnover.

(5) Our Working Capital was sufficient during the financial year 1930-31, to meet our requirements. During this period we received interest on our bank credit balances to the value of Rs. 2,296. This payment was paid at the rate of 2 per cent. Temporarily we had to meet interest charges which amounted to Rs. 6,927 which was charged at the rate of 6 per cent.

(9) Letter No. L. T. 1/31469/C., dated the 24th August, 1931.

In reply to your verbal request of the 21st instant, we have pleasure in sending you herewith six copies of an analysis of the item 'Liabilities for Expenses' Rs. 1,09,396-2-6.

We would mention that this item is already shown under the various headings enumerated in the Profit and Loss Account for that year.

Assuring you of our very best attention at all times.

Enclosure.

*Liabilities for expenses as at 31st March, 1930.*

	Rs. a. p.	
Travelling Expenses . . . . .	357 15 0	Head Office.
Interest . . . . .	9,228 14 3	Bank overdraft.
Rent and Taxes . . . . .	2,603 1 0	Tatanagar.
Law Charge . . . . .	330 0 0	Head Office.
Postage and Telegram . . . . .	66 14 0	do.
Audit Fee . . . . .	1,000 0 0	do.
Indian Establishment . . . . .	12,315 10 0	Tatanagar Staff.
Managing Agents' Expenses . . . . .	38,734 8 6	Head Office.
Agency Allowance . . . . .	8,000 0 0	do.
Insurance . . . . .	72 11 0	do.
Bank Charges . . . . .	1 12 0	do.
Electricity Charges . . . . .	2,960 12 0	Tatanagar.
Charges General . . . . .	189 2 0	Head Office.
Watering Charges . . . . .	522 12 3	Tatanagar.
Board of Works . . . . .	74 15 9	do.
Manufacturing Wages . . . . .	10,710 8 1	do.
Stationary and Printing . . . . .	639 0 0	Head Office.
Repairs and Renewals . . . . .	787 1 0	Tatanagar.
Advertisement . . . . .	1,877 7 6	Head Office.
Freight and Cartage (Inward and Outward).	10,485 10 2	do.
Directors' Commission . . . . .	2,829 2 0	do.
Managing Agents' Commission . . . . .	5,653 6 0	do.
	1,09,396 2 6	

(10) *Letter No. L. T. 1/31505/C., dated the 25th August, 1931.*

As requested by the Board we simplify the evidence we gave on the above subject by the submission herewith of test results obtained on cables imported into India which are termed 'low grade', that is cable which is either without any guarantee, or information as to the standard to which it has been made or is stated to be equal to cable made by the members of The Cable makers' Association.

To further assist the Board in this connection we make the following remarks:—

It can be contended that to compel a consumer to purchase reliable cable, if such action involves his paying a higher price, (as it undoubtedly will) is not reasonable and may not be justified. Assuming that a house is to be wired for say 40 Light and Fan points and the wiring is carried out in teakwood capping and casing (probably the most popular type up-country) the cable will form 15 per cent. of the value of the complete installation so that on the basis of 1 coil of 1/044 V. I. R. Cable to 5

points wired the total cost of cable becomes (including 1 coil of 7/029 V. I. R. Cable for mains)—

	Rs. A. P.
<b>C. M. A. Cable—</b>	
8 Coils @ Rs. 5-3-4 . . . . .	41 10 8
1 Coil @ Rs. 13-12-4 . . . . .	13 12 4
	Rs. . 55 7 0
 <b>Indian Cable—</b>	
8 Coils @ Rs. 4-14 . . . . .	39 0 0
1 Coil @ Rs. 12-13 . . . . .	12 13 0
	Rs. . 51 13 0
 <b>Low Grade Cable—</b>	
8 Coils @ Rs. 3-6 . . . . .	27 0 0
1 Coil @ Rs. 9-14 . . . . .	9 14 0
	Rs. . 36 14 0

It will be seen that there is a saving of Rs. 14-15 on an installation costing Rs. 400 by using 'low grade' cables instead of 'Indian Cables' sold with a Government guarantee of quality. Further, the landed cost of C. M. A. 1/044 is Rs. 4-12 and selling price Rs. 5-3-4 a margin of As. 7 per coil, i.e., 8-92 per cent. profit whilst low grade cable is landed at Rs. 3-0-6 and sold at Rs. 3-6, a margin As. 5-3 per coil or 9-72 profit. Apart from this it is possible at the present time to sell the same cable with a different label at varying prices whilst to attach a 'C. M. A.' label at once enhances the value of a coil of 'low grade' cable from Rs. 3-6 to Rs. 5-3-4.

In our experience we find it is possible to manufacture a cable at Rs. 2-3 per coil which is generally superior to the average 'low grade' cable available in the market and have been offered very considerable business at Rs. 3-6 per coil which gives us a margin of 42-9 per cent. on a small turnover. This is almost exactly three times the margin on 'high grade' cable of this type and size involving more capital.

We wish to emphasise that the ultimate user of the cable very rarely realises that his installation has not been carried out with first class materials. If it was put to him we doubt if he would take the risk of trouble and subsequent loss for a saving of Rs. 14-15 on Rs. 400 (approximately 3 per cent.) particularly if he appreciated that the initial saving has probably reduced the life of the installation from 20 years to 5 years.

In actual practice anyone in any Province in India except Bombay (and Mysore State) can undertake wiring work. Frequently a lump sum price is accepted for an installation and the contractor has to look round for materials at prices which will enable him to complete the work without loss. If contractors were licensed they would take a greater pride in their work and endeavour to build up a reputation which it is difficult for them to do in competition with the casual contractor whose main business is say wood-working or plumbing.

The consumer does not appreciate the position stated herein and he should therefore be safeguarded in such a manner as will result in his electrical work being carried out as economically as possible compatible with safety.

## Enclosure.

*Record of tests on imported cables during the past three years.*

Ref. No.	Size of conductor.	Form of Guarantee given on all label.	Insulation resistance in megohms per mile at 60°F.		
			As actually measured,	C. M. A. standard Minimum for this size and type.	Indian Cable Co. Average for this size and type.
1.	1/044	No guarantee	75	2,000	5,500
2.	3/036	...	Nil	1,250	5,000
3.	3/036	...	Nil	1,250	5,000
4.	1/044	...	Nil	2,000	5,500
5.	7/044	600 megohm grade guaranteed in all respects equal to known standards of the C. M. A.	Nil	900	4,500
6.	7/036	...	Nil	900	4,500
7.	1/044	...	Nil	2,000	5,500
8.	3/029	600 megohm grade	527	1,250	5,000
9.	3/036	...	324	1,250	5,000
10.	7/036	...	Nil	900	4,500
11.	7/064	...	337	900	4,500
12.	3/029	...	413	1,250	5,000
13.	1/044	...	169	2,000	5,500
14.	1/044	600 megohm grade guaranteed in all respects equal to known standards of the C. M. A.	209	2,000	5,500
15.	7/064	...	0.0166	900	4,500
16.	1/044	...	920	2,000	5,500
17.	1/044	...	725	2,000	5,500

(11) *Letter No. L. T. 1/31515/C., dated the 25th August, 1931.*

Assuming that Patna Electric Supply Co., Ltd., was a distributing licensee receiving current in bulk from a hydro-electric supply the position might fairly be represented as follows:—

	Rs.
(a) Buildings	1,00,000
(b) Outdoor Sub-stations	60,000
(c) Public Lamps	28,000
(d) Meters, etc.	53,000
(e) Tools	10,000
(f) Mains	5,70,000
(g) House Services	30,000
(h) Furniture and Conveyances	20,000
	<hr/>
	8,71,000

A duty on uninsulated conductors would affect only (f) and (g) and as (f) includes underground mains the value of these has to be deducted as follows:—

	Rs.	
Mains . . . . .	5,70,000	
		Rs.
Less Underground Mains . . . . .	10,000	5,60,000
	<hr/>	
House Service (Conductors 50 per cent.) . . . . .		15,000
		<hr/>
		5,75,000

30 per cent. of Rs. 5,75,000, i.e., Rs. 1,72,500 represents the value of conductors (this is the installed value the c.i.f. price on which duty is paid would be lower by approximately 5 to 7½ per cent.)

20 per cent. Import Duty on Rs. 1,72,500 = Rs. 34,500.

Rs. 34,500 on a total Block of Rs. 8,71,000 = 3.961 per cent.

Assuming that the additional Capital has to earn 15 per cent. a sum of Rs. 5,175 has to be distributed over 33,00,000 Units which equals .02509 anna per unit increase in cost.

As the cost of mains in a case like this forms such a large portion of the total block expenditure the effect of a duty on conductors naturally increases the initial capital expenditure to a greater extent than in the case of a Company with generating plant and buildings. The effect of such duty is however the same in either case so far as an increase in the cost of current is concerned because the larger income necessary is spread over the number of units sold.

As the licensee usually takes current in bulk at between 1 and 2 annas per unit and can resell at a maximum of 8 annas the small additional cost per unit attributable to import duty, i.e., .02509 anna will not materially affect either the increased sale of current or a reduction in rates.

(12) Letter No. L. T./31552/C., dated the 26th August, 1931.

We forward herewith price lists relating to Continental Cable from which it will be observed that there are two qualities of this make, one known as A. N. Class and the other as H. A. 11 Class.

Price differences for a few of the sizes of each class are as follows:—

*Braided Cable.*

	A. N. 600 Megohm.	H. A. 11600 Megohm.
	Rs. A.	Rs. A.
1/-044 . . . . .	4 12	3 8
3/-029 . . . . .	6 10	5 5
7/-029 . . . . .	11 10	9 4

*Lead Covered Cable.*

	Class A. N.		Class H. A. 11.	
	Single. Rs.	Twin. Rs.	Single. Rs. A.	Twin. Rs. A.
1/-044 . . . . .	15	21	10 8	15 8
3/-029 . . . . .	17	26	14 4	22 0
7/-029 . . . . .	25	38	20 14	31 6

A. N. Class Cable is stated to be—

“Made in strict accordance with the B. E. S. A. Specification-  
No. 7/1926, and guaranteed equal in all respects to C. M. A. 600  
Megohm grade cable”

which statement apparently makes Class A. N. between 15 per cent. and 30 per cent. more valuable than Class H. A. 11 which is stated to be of the same 'Grade', i.e., 600 Megohm (whether the cable tests 600 Megohm per mile or per 100 yards is not stated) without the further guarantee that it is 'equal in all respects to C. M. A. 600 Megohm grade'.

Our complaint is principally in regard to cable vaguely described as is H. A. 11.

We trust these remarks will be of assistance to the Board.

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(13) *Letter No. L. T. 1/32422/C., dated the 18th September, 1931.*

We return herewith the draft of our representatives' oral evidence corrected.

In regard to the suggestions made in reply to Mr. Rahimtoola in reference to uninsulated conductors over 1/10th sq. inch being exempted from import duty we have now had an opportunity to check the effect this suggestion would have on our industry.

We find in the years 1928-29 and 1929-30, the value of conductors manufactured by us which were over 1/10th sq. inch in cross sectional area is greater than we realised when giving evidence. As will be clear from this evidence we were anxious that conductors of a type not manufactured by us should not be affected by any duty that might be imposed to assist this industry. It seems to us now that a simpler method of achieving this object would be a stipulation that *all* uninsulated and aerial weatherproof conductors should bear import tariff except steel-cored aluminium conductors over .25 sq. inch in cross sectional area.

To limit the size to 1/10th sq. inch would deprive the industry of a large measure of protection in respect of stranded copper conductors for the production of which the Company put down expensive plant only 18 months ago.

**THE INDIAN CABLE COMPANY, LIMITED.**

B.—ORAL.

**Evidence of Messrs. F. W. LEAKE, P. WHITE and E. D. JOHNSON,  
recorded at Calcutta, on Tuesday, the 21st August, 1931.**

*President.*—Mr. Leake, you represent the Indian Cable Company?

*Mr. Leake.*—Yes.

*President.*—The Company started operations, I understand, in 1923?

*Mr. Leake.*—It commenced manufacturing in 1923.

*President.*—You are representing the Company registered in India?

*Mr. Leake.*—Yes.

*President.*—The Managing Agents are the British Insulated Cables?

*Mr. Leake.*—Yes.

*President.*—They are a sterling company?

*Mr. Leake.*—Yes.

*President.*—They are themselves interested in the imports of cables into this country?

*Mr. Leake.*—Yes.

*President.*—And they are members of the Cable Makers Association?

*Mr. Leake.*—Yes.

*President.*—In what way is the trade in the kind of cables in which you are interested arranged between the Indian Cable Company and the British Insulated Cables?

*Mr. Leake.*—There is an agreement between British Insulated Cables Limited and The Indian Cable Company Limited to the effect that the former will not offer goods of its manufacture if the Indian Cable Company can manufacture and supply at competitive rates.

*President.*—I find from the figures that you have given us that the proportion of Indian shares to non-Indian in the Cable Company was somewhere in the order of 70 to 50 shares in 1923 and the position now is 50 to 70. It is the other way about.

*Mr. Leake.*—Yes.

*President.*—I take it that that means the fact that you have not been able to declare dividends has made your shares less attractive. Is that the inference to be drawn from that?

*Mr. Leake.*—Yes.

*President.*—To what extent are the Managing Agents interested in the capital of the Indian Cable Company?

*Mr. Leake.*—British Insulated Cables own 37 thousand and odd ordinary shares and 92 thousand and odd preference shares.

*President.*—If you take the amount of paid up capital what proportion of the total paid up capital does that represent approximately?

*Mr. Leake.*—47 to 48 per cent. I have not worked that out.

*President.*—It is just an approximate estimate?

*Mr. Leake.*—Yes.

*President.*—You represent the British Insulated Cables on the Directorate of the Indian Cable Company?

*Mr. Leake.*—Yes.

*President.*—I feel the best way in which I can deal with your case is to review the evidence in the light of the conditions laid down by the Indian



Fiscal Commission. As you know, the conditions are three in number, of which the first is that the industry in question possesses sufficient natural advantages. The kind of natural advantages that the Fiscal Commission had in view fell mainly under four groups. There is first of all the question of sufficiency of the home market. Now I should like to get a clear idea of your total capacity in respect of cables and wires which you are in a position to manufacture. That I think you give in reply to Question 4. From these figures I gather that the total value of the bare copper wire which you draw on your copper mill, taking it at present prices, is Rs. 29.2 lakhs.

*Mr. Leake.*—That is approximately the present value.

*President.*—If I add that figure to the other aggregate figures that you give under the headings Cotton and Silk Covering and Rubber insulated cables, I get the aggregate value at present prices of the maximum output of which you are capable?

*Mr. Leake.*—Yes.

*President.*—That would be approximately Rs. 60 lakhs.

*Mr. Leake.*—Yes.

*President.*—That is to say, if you work to your maximum capacity at present prices that would be the value of your output?

*Mr. Leake.*—Yes.

*President.*—Looking at the trade figures for 1930-31 I find that the total value of imports in 1930-31 was Rs. 36.9 lakhs of rubber insulated cables and Rs. 21.8 in the case of bare copper wire and Rs. 2.8 in the case of telephone and telegraph wires?

*Mr. Leake.*—You don't mean telegraph cables?

*President.*—No, only wires. You are not interested in them?

*Mr. Leake.*—No.

*President.*—In that case the total value of the imports of all classes of wires and cables in which you are interested is about Rs. 58 lakhs (Rs. 36.9 plus 21.8 lakhs).

*Mr. Leake.*—Yes.

*President.*—In 1930-31 your total output was Rs. 19.3 lakhs.

*Mr. Leake.*—Yes.

*President.*—Therefore the total consumption in India in 1930-31 was Rs. 78 lakhs?

*Mr. Leake.*—Yes.

*President.*—If your total capacity is about Rs. 60 lakhs, then it is clear that there is a sufficient market in the country for the kind of cables and wires in which you are interested?

*Mr. Leake.*—Yes.

*President.*—The next point is labour. From what I saw of your works last week and from what I saw of it three years ago I understand a large portion of the work done in your works is really work requiring semi-skilled labour working some automatic machines except the work which is done on the copper mill where the drawing of wire would require highly skilled labour. Is that correct?

*Mr. Leake.*—Yes. In addition, rubber mixing is a skilled operation, as also is lead covering.

*President.*—And the drawing of the wire too?

*Mr. Leake.*—Yes.

*President.*—So I am justified in thinking that the bulk of the work is work that can easily be done by the sort of labour that you can raise in this country. As regards these three classes of work which require skilled labour, you have been able to raise and train sufficient number of people capable of tackling this question?

*Mr. Leake.*—That is so.

*President.*—The next question is the question of power. You get your power from the Tata Iron and Steel Company?

*Mr. Leake.*—Yes.

*President.*—You get it at the usual rate of 9 pies per unit?

*Mr. Leake.*—Yes. There is a sliding scale.

*President.*—If you consume power on a larger scale, you get it at less than 75 anna per unit?

*Mr. Leake.*—Yes. As the consumption increases, the price per unit decreases.

*President.*—There is no difficulty in getting enough supply of power if you want to work to your maximum capacity?

*Mr. Leake.*—No.

*President.*—Then comes the important question of the availability of the raw material. There of course we are waiting for the representatives of the Indian Copper Corporation because the availability of the kind of copper you require is an important point in this connection. The statement which has been made to us by the Indian Copper Corporation is that at present they are in a position only to extract and smelt ordinary furnace copper and not electrolytic copper of the kind that you require, but they have said in their representation that subject to certain conditions it might be possible for them to produce electrolytic copper.

*Mr. Leake.*—Yes.

*President.*—The question is what are the precise conditions in which it can be done?

*Mr. Leake.*—Had the tariff on hard drawn copper wire been the same as on yellow metal sheet, say 15 per cent., when the Indian Copper Corporation commenced manufacturing, the probability is that they would have put down the plant for producing the kind of copper we want instead of putting down a plant for making yellow metal sheets.

*President.*—The present Indian Copper Corporation started operations on a substantial scale in 1929?

*Mr. Leake.*—I could not say definitely.

*President.*—There were various small attempts before but on a substantial scale they started operations, I think, in 1928-29?

*Mr. Leake.*—Yes. You will notice that the remaining 2½ per cent. duty on copper conductors and cables was removed in October 1927 just at a time when The Indian Copper Corporation were considering the class of material they should produce.

*President.*—The yellow metal sheet carries at present a duty of 15 per cent.

*Mr. Leake.*—It is at present 20 per cent. At that time the Ordnance Factories were insisting on electrolytic copper and there was every inducement to put down plant for the production of electrolytic copper.

*President.*—I am glad you have mentioned that point because it has not been mentioned to us. At present the tariff on electrolytic copper rod is 20 per cent. but the whole of it is remitted.

*Mr. Leake.*—Yes.

*President.*—You being the only market for electrolytic copper, the tariff is practically nil.

*Mr. Leake.*—It is nil on the material; it is also nil on the finished article.

*President.*—Now I will proceed to the second condition of the Fiscal Commission which is this that the industry must establish that it cannot be developed at all or developed as rapidly as is required in the interests of the country unless it gets protection. That implies an examination of your costs. The question of determining whether assistance is required by your

industry and if so what measure of assistance is required is one which is rather difficult to settle, because taking one of your most important articles—rubber insulated cables—it is impossible for you to give us any quantities?

*Mr. Leake.*—We can give quantities, but these would not be of any value.

*President.*—I mean the quantities that would be intelligible or really suitable for our purpose. You might be able to give us the weight of it or the yardage of it, but it makes no meaning.

*Mr. Leake.*—Quite.

*President.*—The classes of cables and sizes of cables are so different and the finish is so different that if you gave us so many lakhs of yards, it would mean nothing at all.

*Mr. Leake.*—I should like to observe here that the Indian Cable Company did not ask for tariff protection in respect of rubber insulated cables.

*President.*—Do you refer to the new proposals that you have sent us?

*Mr. Leake.*—Yes.

*President.*—But then you see in order to determine what measure of assistance is required by you against inferior low grade cables we ought to get at any rate an approximate idea of the extent to which you are in need of assistance. You cannot get away from that.

*Mr. Leake.*—I quite agree.

*President.*—Another difficulty that we feel in regard to your costs is this: There is no blame attached to you at all. Your costs are necessarily estimated on a basis of allocation and you have to allocate between bare conductors and rubber insulated cables.

*Mr. Leake.*—Not only that: we should have to allocate it under six heads, cables less, and not less than 1/80th square inch in area, copper above and below 1/80th square inch, and telegraph and telephone wires above and below 1/80th square inch.

*President.*—The system of allocation might be all right for the purpose of your accounting, but from our point of view it might not be altogether satisfactory. What we ordinarily do in a case like that is this. We take a typical product, try and find out what the cost of the Indian Industry is. Then, we take the import price of a corresponding product and then find out the difference between the two. We feel after examining the question very carefully that that is a method which is extremely difficult to apply in your case.

*Mr. Leake.*—Yes.

*President.*—I propose to suggest a method of calculation on which I should like your opinion. What I propose to do is this: I take your total works expenditure in 1930-31 which is Rs. 16.02 lakhs. That is the total works cost. You say in one of your statements that on the present output it would be impossible to effect further economies on the works expenditure.

*Mr. Leake.*—I would like to qualify that statement in one respect. What I had in mind in answering that was that we had already effected economy, but it struck me that that economy was not represented in the figure submitted. You will find that under the heading "Supervision" we say we have two Europeans; we had three Europeans during the period covered by these figures. In future there will be two and that will result in a reduction of Rs. 10,000 per annum.

*President.*—That won't make any substantial difference, so that if you want to reduce your works cost substantially, you could do that only by an increase in the output and a consequent reduction under these heads. That is the only way in which a substantial reduction is possible.

*Mr. Leake.*—That is the solution. An increased output would only increase the cost of fuel, water and power. All other items would remain the same.

*President.*—So that in estimating your costs on the present position we might take Rs. 16 lakhs as the works expenditure?

*Mr. Leake.*—Yes.

*President.*—To that we have got to add the interest on working capital, your Managing Agency and Head Office charges, depreciation and what may be regarded as fair profit which would give you your fair selling price. Taking interest on working capital first, you state in your replies that on your present output the total working capital you would require is Rs. 8 lakhs; that corresponds to the works expenditure on six months output. Your works expenditure in 1930-31 was Rs. 16 lakhs and your working capital on six months' expenditure is Rs. 8 lakhs.

*Mr. Leake.*—That is so.

*President.*—I am prepared to take that as a reasonable estimate of working capital because generally in these enquiries we have found six months works cost is approximately the amount of working finance required. So we take that at Rs. 8 lakhs and calculate it at  $7\frac{1}{2}$  per cent. which is the rate of interest which we generally allow on working finance. That is Rs. 60,000. That has to be added to Rs. 16 lakhs. Then depreciation: you say that the rate of depreciation allowed by the Income Tax Authorities are on the whole reasonable. I looked through the various rates as you have given them. If you take the values of these various items and then work out the average rate you will find that it works out to  $6\frac{1}{2}$  per cent.

*Mr. Leake.*—Yes.  $6\frac{1}{2}$  per cent. on the present valuation.

*President.*—Whatever value you take you will find that generally  $6\frac{1}{2}$  per cent. is reasonable. As a matter of fact this figure that you give of Rs. 1,15,000 is on your present block less depreciation. We have got to calculate depreciation for the purpose of protection not on your actual capitalisation but on your actual block. What we do is to take a fair capitalisation corresponding to the present replacement value of your plant and buildings. You have given a figure of Rs. 15 lakhs as the present replacement cost. So the depreciation will be calculated at  $6\frac{1}{2}$  per cent. on Rs. 15 lakhs which is about Rs. 94,000.

*Mr. Leake.*—Yes.

*President.*—On the question of Managing Agency and Head Office charges the rate that you allow at present, which is Rs. 90,000, that is the remuneration which is based on certain special considerations because for a part of the years the Company has been working the Managing Agents have waived their right to take remuneration at the full rate. Taking the standard rate of remuneration which is expected by Managing Agents on the Calcutta side we have found that it generally works out to somewhere about 10 per cent. of the profits including depreciation, that is before the depreciation is set aside.

*Mr. Leake.*—The Managing Agents in this instance make certain payments on behalf of The Indian Cable Company (Statement shown) and later recover them from the Company. For instance all European salaries on sales are paid by the Managing Agents and recovered. This causes the Managing Agents expenses to appear high.

*President.*—If we proceed on the basis of 10 per cent. then I propose to calculate it this way: depreciation at  $6\frac{1}{2}$  per cent. on Rs. 15 lakhs; that is Rs. 94,000. What do you consider as a fair rate of profit?

*Mr. Leake.*— $7\frac{1}{2}$  per cent. should be fair on the whole capital. You will notice however that for eight years the Company has not paid any dividend.

*President.*—Eight per cent. is the sort of average dividend which we consider suitable for Indian Industries to make it more attractive to investors.

*Mr. Leake.*—That is reasonable for the future. I thought possibly the fact that the Company had continued for sometime without assistance would have been taken into consideration.

*President.*—Your suggestion would really amount to this that we have to allow a rate of profit which is not merely sufficient for the Company to carry on in the future but sufficient to recoup its past losses.

*Mr. Leake.*—If assistance is given for a period of years the dividend you suggest is sufficient to attract investors.

*President.*—The difficulty is the framing of the tariff. You have got to frame the tariff in such a way as to suit the industry as a whole. We cannot differentiate between the special circumstances of one Company and another Company and we have got to proceed on the basis that the rate of protection which is fixed must be sufficient for an industry which comes into existence, say, to-day. What would be the capitalization on that basis? Supposing we allowed 8 per cent. on your Rs. 15 lakhs, that gives you Rs. 1,20,000. Add that to the depreciation and you get profit before depreciation of Rs. 2,14,000. 10 per cent. of that is Rs. 21,000 against your Rs. 90,000. That is the managing agents remuneration. The actual Head Office expenses is calculated at Rs. 2,000 a month. That would be Rs. 24,000 and that gives you Rs. 45,000. Add profit at 8 per cent. to that and you get Rs. 19·21 lakhs.

*Mr. Leake.*—Yes.

*President.*—That on your last year's working is the gross return which you ought to have received in order to make your position reasonably profitable according to our standard. What I propose to do at this stage is to compare that figure, which is our estimate of the fair return that you ought to have got, with the actual price that you have realised on your output of 1930-31. We asked you for some supplementary statements. The difference between this statement and the statement that you sent originally to us is in regard to rubber insulated cables. Your original statement included also your realization on part of the stock left over from the previous year.

*Mr. Leake.*—That is the gross sale.

*President.*—There are really two points. In the original statement the realization that you show against rubber insulated cables of the smaller and larger sizes, included not merely realization on the actual output in 1930-31 but included your realization on stocks carried over from the previous year to this year. That you have deducted. The other point is, in your original statement it was realization excluding discount and commission but not excluding freight and packing charges which you have deducted now?

*Mr. Leake.*—Yes.

*President.*—That gives you a total of Rs. 18·19 lakhs.

*Mr. Leake.*—That is right.

*President.*—Rs. 18·19 lakhs against our estimated fair return of Rs. 19·20 lakhs. There is one point I want to be clear about this figure of Rs. 18·19 lakhs. Have you deducted packing?

*Mr. Leake.*—No, we have only deducted the cost of repacking at depôts.

*President.*—If you look at Form I, the packing which you include in your total expenditure statement has not been deducted from this statement?

*Mr. Leake.*—That figure remains.

*President.*—So that on the result of last year's working your deficiency as compared with your estimated outturn is Rs. 1,01,000. That is the general position—taking what we consider a fair capitalization of replacement cost what you ought to have got was an extra lakh of rupees.

*Mr. Leake.*—Yes.

*President.*—I am trying to see what this extra duty would mean if translated into tariff rates. That is another of the difficulties in the case of your products. It is very difficult to know how to estimate it. The method that I wish to suggest is this. I am not trying to give any indication as to the precise way in which we would ultimately frame the tariff rates if we are satisfied that there is a case for protection. There is already a rate of 20 per cent. on cables which are less than 1/80th of a square inch. Your suggestion with regard to the specific duty is that the amount that results from the application of *ad valorem* duty to high grade cables should be applied to low grade cables?

*Mr. Leake.*—That is so.

*President.*—For the moment let us accept the position that these cables less than 1/80th square inch already bear a duty of 20 per cent.

*Mr. Leake.*—On a very low valuation.

*President.*—It is not tariff valuation in the sense we understand it. They base it on the invoice price. On the low valuation it corresponds to the c.i.f. price of Continental cables. Take cables and wires not less than 1/80th of a square inch on which at present there is no duty except on the rubber insulated cables which bear 5 per cent. I want to try and see what this deficiency which we have estimated would mean if it meant an increase in the tariff rate on cables and wires which at present do not bear any tariff rate. Supposing it was necessary to suggest an increase in the tariff duty, in an industry like this which affects so very closely the general welfare and the progress of industries in this country, you have got to make careful estimates of the burden that this would imply on the public at large. Now take the supplementary statement that you sent in to us. Let us take the classes of cables and wires which bear duties less than the revenue rate.

*Mr. Leake.*—Is 15 per cent. the revenue duty?

*President.*—Yes. If you take bare conductors which are not less than 1/80th of a square inch, the value of that as you estimate is Rs. 2,50,690.

*Mr. Leake.*—That is right.

*President.*—That bears no duty at all.

*Mr. Leake.*—No.

*President.*—Your telephone and telegraph wires not less than 1/80th of a square inch come to Rs. 2,38,664 and the rubber insulated cables not less than 1/80th of a square inch come to Rs. 3,01,970. That bears a duty of 5 per cent.

*Mr. Leake.*—Yes.

*President.*—That has to be taken out in order to know what the rate of profit should be. I shall take 100-105. That gives you the duty free price.

*Mr. Leake.*—Rs. 2,85,000.

*President.*—Adding these three items, it comes to Rs. 7,80,000.

*Mr. Leake.*—Yes.

*President.*—If it was suggested to levy a duty on cables and wires which do not bear a duty now or bear duties lower than the revenue duty, that is the amount on which you have got to calculate your deficiency, *viz.*, Rs. 1,00,000.

*Mr. Leake.*—Yes.

*President.*—That is how much?

*Mr. Leake.*—12½ per cent.

*President.*—If you got therefore a duty of 12½ per cent. on cables and wires which are not less than 1/80th of a square inch, you are squared. That would be a correct presentation of the matter.

*Mr. Leake.*—That is so.

*President.*—So that on these figures it is clear that the second condition of the Fiscal Commission is satisfied. That is to say the industry won't be able to develop as rapidly as is necessary in the interests of the country unless assistance is given and the third condition is that ultimately the industry would be able to dispense with protection. The duty that would be necessary in order to make your position right is a duty of 12½ per cent. which is lower than the revenue duty which is considered to be normally 15 per cent. Personally I should say that the case is clear. What I want to suggest at this stage is on my examination of your costs in the light of the conditions laid down by the Fiscal Commission, the second and the third conditions are satisfied. The first condition is satisfied in regard to

the question of market, labour and power. The point on which we have got to receive further light is the question of the available supply of raw material.

*Mr. Leake.*—Yes. Incidentally I may say that the only raw material which is not obtained in the country is copper.

*President.*—There are numbers of small materials that you require.

*Mr. Leake.*—Yes.

*President.*—The main thing is copper which we have got to discuss with the Indian Copper Corporation.

*Mr. Leake.*—I realise that the whole case hinges on that.

*President.*—The next question that I want to raise is assuming a case for protection is established, what precisely is the best way of granting the protection required and the best way of administering it. That in this particular case is one of very serious difficulty as you yourself admit. Supposing we took this 12½ per cent. duty and we decided to apply it to all classes of cables and wires, on the evidence as you have presented in your representations I personally have my doubts whether as the result of the uniform 12½ per cent. duty, you would be able to raise your prices to the same extent. What I mean is this. You admit your main competition comes from low grade cables.

*Mr. Leake.*—Yes and copper wire also.

*President.*—To the same extent do you find competition in regard to bare copper?

*Mr. Leake.*—No, not to the same extent. In the case of copper wire the raw material forms a large percentage of the value of the finished article, and it is not probable that sufficient reduction in manufacturing charges on imported wire could be made to nullify the effect of a 12½ per cent. duty. In the case of rubber insulated cables the raw materials form a much smaller percentage of the cost of the finished article and a sufficient reduction in manufacturing charges might be made to overcome the effect of the duty. In addition cable leaves a greater scope for reduction in quality or cheapening of finish and an import duty may not have the effect of increasing the market value.

*President.*—The copper rod would amount to as much as 90 per cent. of the value of the finished wire?

*Mr. Leake.*—Yes, in our case.

*President.*—If you have a margin of about 10 per cent. and if that is the extent to which reductions are possible as the result of cheapening quality, that margin is very narrow.

*Mr. Leake.*—So much of the value of the article is in the raw material.

*President.*—Your own suggestion with regard to insulated cables is that specific duties should be imposed. That is the form of protection that you would prefer?

*Mr. Leake.*—This point may not be clear. Specific duties will by no means be the solution of our difficulty with cables. Our original request in 1928 was for prohibition of the importation of cables which did not comply with some recognised standard, failing this every possible restriction should be placed on its use. A specific duty will admittedly increase the cost of low quality material without affecting the cost of the good quality and it is hoped that this increase in cost will restrict consumption to some extent.

*President.*—Are you sure it would increase the price?

*Mr. Leake.*—I am not absolutely sure that it would.

*President.*—Looking at the statement of British and Continental prices, I find on the typical classes of cables that you give there, the Continental c.i.f. price is generally about 66 per cent. of the British c.i.f. price. On an average that is how it works out.

*Mr. Leake.*—Yes.

*President.*—Supposing you took Rs. 100 as the price of the British cables for dutiable purposes and Rs. 66 as the price of corresponding Continental cables, 20 per cent. duty on the British cable would be Rs. 20.

*Mr. Leake.*—Yes.

*President.*—Your suggestion is that Rs. 20 should be fixed as the specific duty on Continental.

*Mr. Leake.*—Rs. 88 against Rs. 100—there is a big difference.

*President.*—That is assuming that the price would go up to the whole extent of the duty.

*Mr. Leake.*—Yes.

*President.*—If it did not, the discrepancy might be wider still.

*Mr. Leake.*—Yes. Personally I thought the most the Indian Cable Company could ask is that the amount of duty on poor quality cable should be the same as on good quality. It might be as much as 300 to 400 per cent. on the poor quality.

*President.*—That is not a practical proposal.

*Mr. Leake.*—It is understood that the cheap cable has to be sold at a price substantially below that for a good quality to find a market. I should say if it was sold at only 10 per cent. to 15 per cent. below it would not find a large market.

*President.*—I find your prices are slightly lower than the C.M.A. prices.

*Mr. Leake.*—That is so.

*President.*—Allowing for the difference in the reputation due to the fact that the C.M.A. cable has been in the market for a very long time, the difference between your price and the C.M.A. price is not a thing about which there can be any complaint.

*Mr. Leake.*—No.

*President.*—Therefore the competition is obviously more from the other source.

*Mr. Leake.*—Yes.

*President.*—An *ad valorem* duty is out of the question, and it won't help you.

*Mr. Leake.*—No.

*President.*—A specific duty might prove completely ineffective.

*Mr. Leake.*—Quite. It is then necessary to consider the question of prohibiting the use of low quality cables as this affects not only the electrical industry as a whole but also the only manufacturing industry in India.

*President.*—Another thing about this duty is this. Supposing we levy a duty on cables not less than 1/80th of a square inch by a general rate of duty, it would of course have the effect of raising the price on high class cables which in the interests of the Company is a thing to be avoided.

*Mr. Leake.*—Particularly as the Indian Cable Company is not really in need of it. It is not in need of any increase in the price of good quality cables, but it does need some protection against low grade cables. I thought that this graph might interest you (shown). It will show that while the value of British imports has dropped and the value of Indian production has likewise decreased the value of continental imports has substantially increased.

*President.*—What that means is that if you take it in quantities, the value of Continental imports have gone up in spite of the general decline in prices. Therefore in terms of quantities the increase in the quantity of Continental cables must have been terrific.

*Mr. Leake.*—Enormous.

*President.*—There are classes of Continental cables which are quite satisfactory?

*Mr. Leake.*—The Indian Stores Department accept one.



*President.*—That is Deka?

*Mr. Leake.*—That is their best grade, and they have other grades.

*President.*—Would you then admit, assuming a case for protection is established, the only way we could make that protection effective for your purpose is by considering whether a system of control should be instituted?

*Mr. Leake.*—That would protect us.

*President.*—Over the importation of low grade cables.

*Mr. Leake.*—That will protect us so far as cables are concerned.

*President.*—That is a method of protection which the Tariff Board has not so far adopted in any industry. In fact I have known of no industry in which all the features are so unlike those of any other industry as yours.

*Mr. Leake.*—I quite agree.

*President.*—Everything has to be done on abnormal lines.

*Mr. Leake.*—It seems to differ in every respect from other industries.

*President.*—As regards the attempt made by the Government of India to control cables—wasn't there a system of control which was in force between 1917 and 1922 or 1923?

*Mr. Leake.*—Yes.

*President.*—But I gather from papers that I have seen in connection with that, that the control was attempted really under the Merchandise Marks Act.

*Mr. Leake.*—Yes.

*President.*—The question at issue there was whether cables should be allowed to be imported into this country which bore labels or marks which looked like C.M.A. cables.

*Mr. Leake.*—I understand that the basis on which they worked was something like this. If a cable was labelled C.M.A. without the country of origin, that was considered to be misrepresented and not admitted into the country. Any cable which was labelled as being "equal to C.M.A., so far as these standards are known" was tested to ascertain whether it was really so. If it was, it was admitted. If it was not, it was not admitted. If the cable bore no guarantee or statement of quality it was admitted because it could not be contended that it was in any way misrepresented.

*President.*—But the Government of India has discovered on the advice of their lawyers that this method of inspection is *ultra vires*.

*Mr. Boag.*—It is *ultra vires* of the Merchandise Marks Act.

*Mr. Leake.*—Yes.

*President.*—What we have got to consider now is not whether an arrangement of this kind of control could be introduced under the Merchandise Marks Act, but whether something on those lines could be introduced under the Indian Electricity Act. The Indian Electricity Act confers on the Governor General in Council the power of making rules amongst other things for the prevention of the use of electric wires and cables which endanger the public safety, property and things of that kind. The point for consideration is whether by the use of the rule making powers, the Government of India would introduce a system of control which would serve the kind of purpose we want. There the point is this. Supposing we decided—it is not a matter which as a Board we have considered yet—there was a case for considering this question of control, I should like to get some idea of the practical difficulties which a control of that kind would involve. Now there are obviously two ways of attempting control. Supposing the Government of India made rules under this section of the Electricity Act, they might say that no cables which do not satisfy the B.E.S.A. standard should be used in house wiring. But how on earth are you going to supervise it?

*Mr. Leake.*—It is a serious difficulty, once the cable is in the country it is very difficult to control its use. The Supply Companies would need to be empowered to refuse to supply current to houses wired with unapproved

cable, some would and some would not exercise reasonable care in this direction.

*President.*—It is absolutely out of the question to control this kind of thing by house to house inspection?

*Mr. Leake.*—That is my feeling.

*President.*—In the first place it would be ineffective. In the second place it would mean a tremendous amount of vexatious interference.

*Mr. Leake.*—Yes. If Electric Supply Companies were empowered to refuse to connect any installation on the ground that it was not wired with cable to an acknowledged standard some would strictly enforce this and others would not. This practice might be considered by some Supply Companies to retard the development of electricity. A Supply Company is mainly interested in selling current and provided the leakage is not great enough to cause trouble it might continue indefinitely resulting in increased revenue to the Supply Company.

*President.*—Then does it come to this that the only practical method of control that deserves consideration is control by the Government of India?

*Mr. Leake.*—I would suggest that no cable should be allowed into India if it does not comply with a fixed standard and has the maker's name on the tape throughout the entire length of the cable.

*President.*—Supposing you lay down some kind of standard—let us say B.E.S.A. standard—on top of that you want the name of the maker?

*Mr. Leake.*—Yes.

*President.*—What is the point of that?

*Mr. Leake.*—Supposing a cable passes the test at the time of entry and afterwards proved to have a short life, it would be possible to draw the attention of the Inspection Department to the fact that certain kinds of cable are not lasting. They can keep a look-out for this particular cable and warn the importer that the quality must be improved. If the maker's name is on the tape it is easy to identify the cable, without it there is a possibility that the faulty cable will be sent to The Indian Cable Company with a complaint that their cable has failed. A cable may be admitted and not give lengthy service and such a cable, if it bears no distinguishing mark may damage the reputation of other reliable cable. There is no difficulty in inserting the maker's name during manufacture. Some continental makers do already put their name on the tape on the better quality and all British makers do.

*President.*—Have you any idea of the concrete arrangements that have to be made if Government decide to introduce a system of inspection?

*Mr. Leake.*—Supposing every cable imported into India was labelled either C.M.A. or guaranteed to C.M.A. standard, at the port of importation it would be possible to ascertain by testing whether it was electrically up to that standard.

*President.*—How does C.M.A. come in? Supposing Government said B.E.S.A.?

*Mr. Leake.*—The B.E.S.A. specification only covers half the test. This lays down conductivity, thickness of insulation, and di-electric strength. The Insulation Resistance is not covered by this standard. Insulation Resistance figures are laid down by the Institution of Electrical Engineers Rules for wiring Buildings. The C.M.A. standard covers both.

*President.*—Would it be impossible for electrical advisers to the Government of India to lay down standards with reference to these factors?

*Mr. Leake.*—They could lay down their own standards as The Indian Stores Department do in connexion with their contracts.

*President.*—If you say that unless the cable is marked C.M.A.—the C.M.A. represents a certain definite standard.

*Mr. Leake.*—Their electrical standards are published.

*President.*—It might be a little difficult to adopt a proposal of that kind. It is much better to have certain definite standards like the Indian Stores Department's standards.

*Mr. Leake.*—Yes.

*President.*—You can call it I. S. D. standard if you like?

*Mr. Leake.*—The I. S. D. standards have been copied from B.E.S.A. and the Institution of Electrical Engineers rules for wiring buildings and are identical with C. M. A. That is why I suggested going to the source and adopting C. M. A. standards.

*President.*—It is much better to call it by a separate name?

*Mr. Leake.*—Yes. Say, "Indian" Standard.

*President.*—Another point is you need to have testing houses at the ports?

*Mr. Leake.*—Yes, at the present time two exist, one at Alipore known as The Government Test House, and The Metallurgical Inspectorate at Tatanagar.

*President.*—Tatanagar is no use?

*Mr. Leake.*—No.

*President.*—It would be a fairly expensive thing to instal a testing house?

*Mr. Leake.*—I could not give you the exact figure. Approximately it would cost Rs. 20,000 per installation. The testing apparatus might be necessary at Madras, Bombay, Karachi and Rangoon.

*President.*—I thought that it was much more expensive.

*Mr. Leake.*—The actual apparatus is not very expensive. If it was necessary to employ a whole time tester this would be costly.

*President.*—Rs. 20,000 would be the cost of the testing house with equipment and so on?

*Mr. Leake.*—Yes.

*President.*—That would not include the salaries of people who will be running the place?

*Mr. Leake.*—No.

*Mr. Boag.*—There would not be any continual work?

*Mr. Leake.*—No.

*Mr. Boag.*—The best arrangement would be for the Government of India to get the provincial Government Electrical Inspectors to do that job?

*Mr. Leake.*—Yes.

*President.*—It is difficult to make a suggestion unless we had more positive evidence that public safety was really in danger. On that we have gathered on the whole very little evidence.

*Mr. Leake.*—If you had had more time at Tatanagar I could have demonstrated some unsafe cables obtained from the Bazaar.

*President.*—Could you give us a detailed note?

*Mr. Leake.*—We could not indicate the maker's name. We could state the grade of cable from the manufacturers label and give the actual test results.

*President.*—The only other question that I want to raise is about the additional burden that would be placed on the consumer of electricity (see Question 29).

*Mr. Leake.*—This assumes throughout 20 per cent. on uninsulated conductors.

*President.*—It is not so much the particular figures I am concerned with. At the moment I want to know the method by which you have calculated

it. Take your Example No. 1. You calculate that the cost of conductors is 1.424 per cent. of the cost of a hydro-electric scheme.

*Mr. Leake.*—Rs. 34 lakhs is almost a third of the total capital expenditure.

*President.*—Rs. 145 lakhs is the cost of the scheme including generation, transmission and distribution?

*Mr. Leake.*—Yes.

*President.*—If you take the whole scheme covering not only transmission but also generation and then take the proportion which the conductors bear to the total cost of the scheme, you might get a very, very small proportion. As regards the second example (Benares Electric Light and Power Company) do they generate their own electricity?

*Mr. Leake.*—Yes, with steam turbines. The total block expenditure is Rs. 21.61 lakhs and the cost of mains about Rs. 4 lakhs.

*President.*—That includes their plant for generating electricity and their transmission and distribution. Probably the distribution cost is not given. The third example is the Patna Electric Supply Company Limited. They also generate their own electricity?

*Mr. Leake.*—Yes.

*President.*—Supposing I took this line that if you took a scheme of electric supply which included not merely transmission but also generation, then it was probable that the cost of conductors would form only a small proportion of the total capital expenditure, but suppose you took a distributing company which is not concerned with generation but with transmission and distribution, it would affect its cost considerably.

*Mr. Leake.*—They would have to instal transformer substations with switch gear. Supposing the cost came to 20 per cent., the mains then would be 80 per cent. and the conductors would be one-third of that 80 per cent. We have asked for a duty on one-third of the 80 per cent.

*President.*—The transformers generally constitute 20 per cent?

*Mr. Leake.*—It is difficult to generalise, but I think it is a safe figure to take

*President.*—It is quite likely that objection might be taken on the ground that there might be a number of small schemes hereafter in various parts of the country where there might be corporations undertaking the business of distribution taking the electricity from some main scheme.

*Mr. Leake.*—If you take the capital sunk in the mains, the conductors form one-third.

*President.*—It might conceivably mean an increase in the rates to the consumer.

*Mr. Leake.*—The necessary increase in cost of current would be very small indeed.

*President.*—Could you give us some cases?

*Mr. Leake.*—I will work this out and send the figures to you. Generally in the case of a distributing Company current is purchased at 1 to 2½ annas and may be sold up to 8 annas per unit so that there is a substantial margin to cover any small increase in cost.

*President.*—Would you give us a note on that?

*Mr. Leake.*—Yes. Another point is that copper conductors now cost less than half the figure a year or 15 months ago. Formerly Electrolytic wire bars were £84 per ton and are now £36 per ton. If electrical development was not retarded 18 months ago it will not be retarded now with E. W. B. at £36 plus 20 per cent. duty.

*President.*—The line may be taken that if you raise the cost of conductors in regard to the small distribution schemes probably it would not necessitate an increase in the cost of electricity but that it would certainly mean no reduction. I can quite imagine a little town corporation taking

the line that it is next to impossible to consider the question of reducing the rates.

*Mr. Leake.*—In my examples I have taken concrete cases. The figures are from the Balance Sheets of Companies in actual operation and the effect of the duty on the cost of current is so small as to be negligible.

*Mr. Rahimtoola.*—As regards question 1, you state that 1,28,775 shares were offered to Indian shareholders and only 320 were taken up. How did you offer these to the Indian shareholders?

*Mr. Leake.*—These are preference shares and were offered to the Ordinary Shareholders in proportion to the number of ordinary shares held. I think one preference share was offered to the holder of three ordinary shares. We found that Indians took up 320 shares only whereas non-Indians generally took up their full quota.

*Mr. Rahimtoola.*—At present you are making a very small quantity of aluminium wire: in 1930-31 it is only 13 tons.

*Mr. Leake.*—That is correct. Most of the heavy aluminium conductors have a high tensile steel core. The steel is generally about 110 tons per square inch tensile strength. The aluminium carries the current and the steel core takes the mechanical tension.

*Mr. Rahimtoola.*—Is it your intention to increase the tonnage of this kind of wire?

*Mr. Leake.*—Our intention is to make it if we can. At the present moment our difficulty is in regard to the high tensile steel core. We cannot obtain suitable steel and if we could we should be unable to draw it, we therefore have to import the correct size of steel wire. With this we can produce the finished conductor.

*Mr. Rahimtoola.*—It means that you are not at present in a position to increase the output because of certain difficulties?

*Mr. Leake.*—Yes. The only difficulty being the steel core. For example the Pykara Electric Scheme where steel aluminium conductors are employed which can be imported in the same time that we would require to import the steel wire with which to produce the conductor. Where no great strain is involved as, for instance, in the case of house service connections plain aluminium is used and with these we have no difficulty. It is doubtful whether the steel wire produced in India has the requisite tensile strength.

*President.*—If we were to put a duty on wire we would have to consider the question of excluding special classes of steel wire?

*Mr. Leake.*—Yes. These could be imported under license.

*Mr. Rahimtoola.*—You are at present importing American and Egyptian cotton; may I know why Indian cotton is not suitable?

*Mr. Leake.*—Indian cotton is obtainable as fine as 26 counts which is suitable for braiding cables. Instrument wires requiring two layers of cotton with only a slight increase in diameter involve the use of 50 to 100 counts cotton and these are only produced from long staple cotton.

*Mr. Rahimtoola.*—Therefore it would not be possible for you to replace American or Egyptian cotton by Indian cotton?

*Mr. Leake.*—Not until the cotton can be spun sufficiently fine but our hope is that some day we will get cotton sufficiently finely spun in India.

*Mr. Rahimtoola.*—In answer to question 8 you say "The following materials are obtainable in India of requisite quality", and you put down cotton at the head of the list.

*Mr. Leake.*—Our consumption of Indian cotton is far greater than that of the imported cotton now that we can get it as fine as 26 counts. Later we hope to get it finer and dispense with importations altogether.

*Mr. Rahimtoola.*—Then you go on to say "Additional materials which will eventually be obtainable are Copper, French Chalk, Magnesium Carbonate, Silk, Zinc White, Zinc oxide, Galvanised iron wire and Calico". May I know what is your source of information?

*Mr. Leake.*—For copper we are depending entirely on the Indian Copper Corporation; French chalk we have obtained in India but it is not sufficiently fine and we have asked the manufacturers to improve the quality. Magnesium carbonate we can get locally but it is not quite suitable for our purposes. Silk of course is produced in India. As regards that again some of the qualities that we tried were not quite up to the standard but we think we will be able to adapt Indian silk to our purpose.

*Mr. Rahimtoola.*—You say that the quality of some of these are not up to the standard required by you; have you brought that to the notice of the manufacturers?

*Mr. Leake.*—Yes. Then Zinc white; that is an article manufactured in India. It is only a question of getting it sufficiently fine and of sufficiently high purity. Zinc oxide is produced locally. For galvanised iron wire we are dependent on the Steel Wire products. If we can get the wire there is the difficulty of galvanising it which we may have to get done ourselves. Calico of course we are importing at present because we want very finely woven material which is also printed with our name on it.

*Mr. Rahimtoola.*—All these you are importing at present because the qualities are unsuitable?

*Mr. Leake.*—Not entirely quality. Sometimes it is not in the form in which we require it. It is only a question of time and all the materials will be obtainable here. So long as there is a demand the supplier will always try to improve the quality or alter the form to meet that demand.

*Mr. Rahimtoola.*—In answer to question 12 you have laid emphasis on labour agitation. I suppose you have had no labour trouble?

*Mr. Leake.*—Very nearly once or twice!

*Mr. Rahimtoola.*—Was that at the same time as the steel strike?

*Mr. Leake.*—Yes. As a matter of fact you will be interested to know that although we have only about 700 employees we have a Cablemakers' Union.

*Mr. Rahimtoola.*—You have reduced it to 400 now?

*Mr. Leake.*—We are short of orders. The present reduction is entirely due to shortage of work. We have reduced European establishment, any promising apprentices have been transferred to British Insulated Cables for further training in electrical work.

*Mr. Rahimtoola.*—I would like to discuss a little about the protection that you ask for. In the first instance you know that in the report of the Tariff Board on the question of tariff inequality it is stated that the Tariff Board at that time considered that a *prima facie* case for holding an enquiry on the Company's claim for protection was established, and I find that in your letter to the Government of India you make this point. I find also that the Tariff Board at that time said that the Company expected that the copper required for the manufacture of wire and cables at its works at Jamshedpur might be obtained in the near future from mines not far removed from Jamshedpur.

*Mr. Leake.*—That was in July 1928; they were just starting them.

*Mr. Rahimtoola.*—You told us that they preferred to confine their attention to yellow metal and give up the question of electrolytic copper because there was not sufficient demand for it.

*Mr. Leake.*—That was because the tariff was so arranged that it was more profitable for them to make copper ingots and yellow metal sheets.

*Mr. Rahimtoola.*—You know perfectly well that the claim for protection can only be justified if the principal raw materials are obtainable in India and if a Company which wants protection is in a position to use that raw material; and you were warned in 1928 by the Tariff Board that the question of the supply of copper was a very serious question for you if you at all wanted to come before the Tariff Board for protection.

*Mr. Leake.*—The Tariff Board recommended that the Indian Cable Company should be exempted from payment of import duty on copper rod permanently. At that time it was a temporary measure. The duty on copper ingot and yellow metal sheet was 15 per cent. and it was more profitable to them to produce these than to produce electrolytic copper for the Indian Cable Company at a price which would compete with importations duty free. At present copper wire to B.E.S.A. standards is sold at Rs. 37 per cwt. while furnace ingot copper is Rs. 39 per cwt.

*Mr. Rahimtoola.*—You have had, I understand, conversations, negotiations and correspondence with the Indian Copper Corporation. I want to know what exactly would induce them to produce the necessary copper which you want.

*Mr. Leake.*—If it was sufficiently profitable to them . . .

*Mr. Rahimtoola.*—What do they mean by “sufficiently profitable”?

*Mr. Leake.*—I cannot speak on behalf of the Indian Copper Corporation but I understand that if the import duty on electrical conductors, that is bare copper wire, is the same as it is on ingots there is still a prospect of the Indian Copper Corporation supplying us with raw material.

*Mr. Rahimtoola.*—As regards power you state that you have brought it as low as 72. I understand that the price of power per unit is fixed in comparison with the price of coal?

*Mr. Leake.*—That is so. It is also on a sliding scale with regard to the quantity used.

*Mr. Rahimtoola.*—The price of coal is not the only criterion?

*Mr. Leake.*—No. The quantity consumed is also a criterion.

*Mr. Rahimtoola.*—The point of importance which you have raised here and which the Board will have to consider very seriously is the question about these inferior cables. You say that it is these cables which are more or less a danger to life. I must say that a statement like this coming from you would not be very convincing because having regard to the increase in imports of these cables and having regard to the fact that large quantities of these cables are being used at present in India, the Board would require some other evidence to substantiate your statement. If it is really bad I can't understand how its import can go on increasing and there is no complaint from people using these cables. The Tariff Board would like to know whether there is any complaint from people who use it?

*Mr. Leake.*—That is a difficult question for me to answer because they would not complain to me about the quality of the cable which other companies supply. But we have done a considerable amount of testing.

*Mr. Rahimtoola.*—If they are really bad, I cannot understand why there should be such a drop in imports from Great Britain as against imports from the continent?

*Mr. Leake.*—The present economic position is responsible for it. Further, the user of the cable does not understand that there is danger and he therefore accepts cables of a lower standard.

*Mr. Rahimtoola.*—He does not understand that there is danger when he instals it but he does understand when it begins to create trouble; therefore once the trouble starts that news easily spreads and people would refuse to have continental cables of inferior quality?

*Mr. Leake.*—If one brand gets a bad name, the name is changed and it is sold under another name.

*Mr. Rahimtoola.*—Whether the Tariff Board or the Government interferes or not if there is systematic dumping of a quality which is going to endanger human life, people will surely stop taking it?

*Mr. Leake.*—Why did Australia consider it necessary to take action? The climate of Australia is not so trying as that of India.

*Mr. Rahimtoola.*—You have said that even if the cables were tested and found sufficiently up to the standard, the question would remain how long

it would take to deteriorate. That is the point on which we are talking now. With regard to climate considerations your proposal is that these cables should be prohibited entirely, is that right?

*Mr. Leake.*—We have to decide what standard of test is necessary.

*Mr. Rahimtoola.*—This will involve the serious question about preference in this way. If it is proved that the cables which Continental makers are importing into India are good enough for the purpose—it may not be very good but it is satisfactory—in spite of the testing being of a lower standard, you cannot reject it or prohibit it on that ground.

*Mr. Leake.*—It is necessary to decide a minimum test which a cable ought to pass.

*Mr. Rahimtoola.*—The Continental people may say that the test applied should be lower?

*Mr. Leake.*—The Indian Stores Department consider that as the present specifications have been in existence for about 30 odd years and have given entire satisfaction it is unnecessary to lower the standard. If other makers are forced to raise their standards they can do it. Some of them will not do it unless they are compelled.

*Mr. Rahimtoola.*—I don't understand why the Tariff Board should be made an instrument for their being forced to go up to the standard if they are found in actual practice satisfactory.

*Mr. Leake.*—It amounts to this; so far as The Indian Cable Company is concerned, if competition in very low grade materials continues in its present form The Indian Cable Company will be forced to reduce its standard of quality in order to compete. It is for someone to fix a minimum standard of quality or ultimately competition will lower this to a dangerous level.

*Mr. Rahimtoola.*—It is very difficult to decide. According to you, you want to clearly lay down a minimum test which implies indirectly preference.

*Mr. Leake.*—I would not insist on British Standard. Adopt any Standard. If it is decided by all Electrical Engineers adopt a lower standard.

*Mr. Rahimtoola.*—Your proposal is that a large number of tests should be carried out even out of the Continental imports.

*Mr. Leake.*—I don't say Continental, but all imports.

*Mr. Rahimtoola.*—Your grievance is against Continental.

*Mr. Leake.*—Yes, because they are cheap. Continental cables are the inferior ones.

*Mr. Rahimtoola.*—You mean inferior regarding the test?

*Mr. Leake.*—Apart from the test examination of the cable will show whether it is inferior or not. That brings us back to the question as to whether British cable is too good or Continental too poor in quality.

*Mr. Rahimtoola.*—Then to my mind the question is what should be the minimum quality required.

*Mr. Leake.*—Yes.

*Mr. Rahimtoola.*—For a satisfactory working of electrical cables.

*Mr. Leake.*—Yes.

*Mr. Rahimtoola.*—It need not necessarily be British, but it has to be decided after full investigation into the whole case.

*Mr. Leake.*—When a minimum is fixed, we ask that all cables imported into India should be above that minimum.

*Mr. Rahimtoola.*—Or the minimum?

*Mr. Leake.*—Quite.

*Mr. Rahimtoola.*—In answer to supplementary question 3, you have said about the block value of your property in 1924 and 1930. I suppose the increase in the amount is entirely due to residential quarters.

*Mr. Leake.*—No. I think we have put in a certain amount of additional plant.



*Mr. Rahimtoola.*—My point of view was that that expenditure was an extension more or less.

*Mr. Leake.*—Yes.

*Mr. Rahimtoola.*—There were no residential quarters in 1924. The details are here. What I want to know is that that was new expenditure in 1930 and which was not in 1924. In 1924 there was no item of residential quarters. I don't know whether it is omitted.

*Mr. Leake.*—It is Rs. 7.15 lakhs. We spent about Rs. 50,000 in 1924.

*Mr. Rahimtoola.*—It is not shown here.

*Mr. Leake.*—It is not shown separately in the first instance. Later it was separated when showing depreciation because the Income Tax Authorities allow a different rate of depreciation on Residential and Factory buildings.

*Mr. Rahimtoola.*—This was made for the Income-tax and not for the Tariff Board?

*Mr. Leake.*—You asked for certain particulars in the questionnaire under certain headings and buildings is one. In the supplementary questionnaire you ask for details of depreciation and as depreciation is allowed at different rates by the Income-tax Authorities on Residential and Factory buildings these are now shown separately.

*Mr. Rahimtoola.*—In the balance sheet for 31st March 1930, page 8, there is one item "Liabilities for expenses" which I do not understand.

*Mr. Leake.*—I will give you details in writing.

*President.*—Your balance sheet for 1930-31 is still to be treated confidential?

*Mr. Leake.*—Yes.

*President.*—When do you generally publish it?

*Mr. Leake.*—The balance sheet will be out in about two months time. All the figures do not quite tally.

*Mr. Rahimtoola.*—You have sent us a statement about the share capital. I find that 7,380 shares held by Indians have been forfeited. Is it due to want of payment?

*Mr. Leake.*—It is due to the non-payment of call money.

*Mr. Rahimtoola.*—But I suppose you adopt the usual procedure if they pay up the arrears. I take it that you transfer those shares to them.

*Mr. Leake.*—If they pay the arrears, their case will be considered.

*Mr. Boag.*—You claim that your manufactures are up to C. M. A. standard?

*Mr. Leake.*—I claim that our standard is higher.

*Mr. Boag.*—You told us that the real test of the cable is durability.

*Mr. Leake.*—Yes.

*Mr. Boag.*—Have your products been on the market sufficiently long to face that test?

*Mr. Leake.*—It is a matter of opinion.

*Mr. Boag.*—I should like to know what your opinion is.

*Mr. Leake.*—Government have tested cables monthly for two years and they are still well above the I. S. D. standard.

*Mr. Boag.*—After 2 years?

*Mr. Leake.*—We had to experiment for the first two or three years and have steadily improved the quality until to-day our opinion is that Indian Cables are the best on the market. Cables supplied to The Tata Iron and Steel Company, Limited, have been in continuous service since 1923 and have given every satisfaction.

*Mr. Boag.*—Has that been tested regularly?

*Mr. Leake.*—I do not think it is tested. They say it is perfectly satisfactory.

*Mr. Boag.*—I don't quite understand the basis on which you have suggested these specific duties.

*Mr. Leake.*—Per 100 Yard Coil.

*Mr. Boag.*—Will you take your Schedule No. 1 attached to your answer to question 28 as regards Flexibles? Take 23/36 size. The duty is Rs. 3-9.

*Mr. Leake.*—The present duty is Rs. 2-1. On British we suggest Rs. 3.

*Mr. Boag.*—You suggest an increase of Rs. 3-9.

*Mr. Leake.*—That is another size.

*President.*—Rs. 2-1 is how much per cent.?

*Mr. Leake.*—20 per cent.

*Mr. Boag.*—The total comes to Rs. 12-7.

*Mr. Leake.*—That is correct.

*Mr. Boag.*—Your price is Rs. 18-2 for that size.

*Mr. Leake.*—It should be Rs. 13-2. 23/36 is a much more expensive cable.

*Mr. Boag.*—Take the 14/36 cable. The Continental price is Rs. 4-14 and your price is Rs. 13-2. You suggest a duty of Rs. 3.

*Mr. Leake.*—On all cables of the same kind.

*Mr. Boag.*—That is not going to bring the price of the Continental stuff anything like up to yours.

*Mr. Leake.*—No. We have suggested a specific duty as being of partial assistance. Actually there is considerable difference in the appearance of Indian Cable flexible and the cheap one mentioned. Any buyer could discern the difference and one would fetch a much higher price than the other.

*Mr. Boag.*—Between Continental, British and yours?

*Mr. Leake.*—Showed and explained.

*Mr. Boag.*—You think that Rs. 3 duty would be sufficient to give your manufactures sufficient protection.

*Mr. Leake.*—It would certainly have the effect of increasing the price of the inferior flexible and we can then endeavour to compete with a high class one at a higher price or a better one at the same price.

*Mr. Boag.*—Take Schedule 11—Braided Single 7/029 size—Rs. 13-12-4; that is British and Continental Rs. 9-14 and the specific duty recommended is Rs. 2.

*Mr. Leake.*—Our price is Rs. 12-13 and that of the low grade cable Rs. 9-14.

*Mr. Boag.*—The difference is Rs. 3.

*Mr. Leake.*—Yes, about Rs. 3. The specific duty is not going to solve the problem entirely. We may have to reduce our price. In any case it will reduce the difference.

*Mr. Boag.*—You do not suggest that the specific duty ought to cover the whole difference between their price and yours?

*Mr. Leake.*—No. We are not suggesting that the duties should be raised above the amount payable on the high grade material imported at a higher valuation. Specific duties will only help the situation by reducing the difference in price. They are not the final solution.

*President.*—Inferior cables would become of greater public danger than ever?

*Mr. Leake.*—Yes, if we reduced our quality. There is no limit of inferiority. One could go right down to a conductor with a little cotton braid and pitch as insulation.

*President.*—As regards the measurement of cables 7/044 and so on, is that the sectional area?

*Mr. Leake.*—That is the number of wires composing the cable and diameter of each wire (in inches).

*President.*—Tell me the precise diameter measurement which corresponds to 1/80th?

*Mr. Leake.*—7/044 is just below. 7/052 is just above. No. 11 S. W. G. is below and No. 10 S. W. G. is above.

*Mr. Boag.*—In 1928 you suggested this test for cables coming into the country (showed the report).

*Mr. Leake.*—We put forward that suggestion. The test suggested is too low for small sizes although the test is reasonable for large ones. The Tariff Board at that time could not consider the suggestion as their terms of reference were one of "Tariff Inequality". It is not really for the manufacturer to suggest a standard it is for the user and the Electrical Advisers to Government.

*Mr. Boag.*—Would you still put that forward if you were asked?

*Mr. Leake.*—I should elaborate it. The test is too low for some cables and alright for others.

*Mr. Rahimtoola.*—I want to ask you one or two questions about your proposal regarding protection. As far as I understand, you have made a distinction between wires and cables and you want a certain test to be applied as far as cables are concerned.

*Mr. Leake.*—Yes.

*Mr. Rahimtoola.*—If the Tariff Board can suggest some way by which they recommend a kind of test similar to C.M.A., then you would not press for any other test or protection on cables?

*Mr. Leake.*—That is right.

*Mr. Rahimtoola.*—I want to understand the Company's view point regarding wires. I have seen your statement which you sent to the Government of India in which it was stated that your former representation to the Tariff Board was that there should be exemption from duty on all your raw materials and ten per cent. protection on uninsulated copper conductors. I want to know what your revised proposal is.

*Mr. Leake.*—The revised proposal is 20 per cent.

*Mr. Rahimtoola.*—Instead of 10 per cent.?

*Mr. Leake.*—Yes. The value at that time was more than double. The alternative to 20 per cent. is a specific duty of Rs. 6-8 per cwt.

*Mr. Rahimtoola.*—That you have suggested now.

*Mr. Leake.*—Yes. The reason is that at present prices we cannot manufacture wires profitably. Any duty on Copper Wire will definitely assist us because the manufacturer importing into India has limited scope for cutting prices. It would be impossible for any one to nullify the duty by cutting manufacturing charges. On the question of uninsulated conductors one thing which has worried me since we made our representation in 1929 is this. I have explained to you our difficulty in making steel-cored aluminium conductors. In the case of large schemes like Uhl River and Pykara very large quantities of steel-aluminium conductors are used. To suggest that a duty be put on copper and not on aluminium will result in the latter being substituted for the former. It is inadvisable to put a tariff on conductors we cannot make such as the large steel-aluminium one referred to. The difficulty would be overcome if all uninsulated conductors up to and including 1/10th square inch were subject to 20 per cent. duty. The Steel-Aluminium conductors referred to would then still be duty free because they are usually much above this cross sectional area. We suggest bare conductors 1/10th square inch in cross sectional area or less are subject to 20 per cent. duty and those not less than 1/10th square inch are duty free.

*President.*—Is one-tenth the point at which aluminium comes into competition?

*Mr. Leake.*—That would eliminate the duty on Steel-aluminium conductors. Some aluminium conductors would be affected but not a large quantity.

The steel-aluminium conductor is usually only employed on Extra High Tension Lines and the cross sectional area is much above 1/10th square inch.

*President.*—Only in main transmission lines?

*Mr. Leake.*—Yes.

*President.*—Is that being increasingly used in India?

*Mr. Leake.*—It is almost exclusively used for main transmission lines.

*President.*—That is to say in all these hydro-electric schemes?

*Mr. Leake.*—Yes.

*President.*—What about the subsidiary lines?

*Mr. Leake.*—Subsidiary lines are usually copper.

*President.*—Why don't they have underground transmission lines?

*Mr. Leake.*—The cost is 2 to 2½ times that of overhead construction.

*President.*—Why should it be so much higher? They are only paper insulated cables.

*Mr. Leake.*—The cables are paper insulated, lead sheathed and armoured and the cost together with the cost of digging trenches and the employment of highly skilled labour for joining makes the total cost much in excess of that of an overhead line.

*President.*—All the main transmission lines of Tata's are underground?

*Mr. Leake.*—No. The main transmission lines are overhead. The voltage employed is in fact higher than that at which any cable is yet working. The mains in Bombay are underground.

*President.*—This point about copper conductors, let me have it clearly. Your suggestion is that the distinction between copper conductors liable to duty and not liable to duty should be fixed at 1/10th.

*Mr. Leake.*—Yes, so far as uninsulated conductors are concerned.

*President.*—I mean bare conductors?

*Mr. Leake.*—Yes, bare uninsulated aerial and insulated cables known as Weatherproof cables.

*President.*—Why do you say bare uninsulated?

*Mr. Leake.*—Because that expression is used in the Tariff Schedule.

*President.*—Supposing you had a duty fixed on bare copper conductors and it was a specific duty, the objections to the effectiveness of a specific duty in the case of insulated cables would not apply, at any rate to the same extent. Supposing you had a specific duty of Rs. 6 on conductors less than 1/10th, that specific duty would not result in the quality of that kind of bare conductors being made much lower than it is now?

*Mr. Leake.*—No.

*President.*—Because there is a limit to which you can reduce the quality.

*Mr. Leake.*—Quite.

*President.*—Therefore a specific duty in the case of bare copper conductors would be effective?

*Mr. Leake.*—Yes.

*President.*—Whereas a specific duty in the case of rubber insulated cables would not be effective?

*Mr. Leake.*—Quite. I think it might help if you obtained the views of persons interested in Hydro-electric schemes as to the best way of applying a tariff which will not penalise them in regard to conductors we are unable to make but will at the same time assist us with those we can make. It appears at first sight that if the limit was fixed at 1/10th square inch this would help the Indian Cable Company, whose business is largely in sizes below this sectional area.

*Letter from the Tariff Board, to Messrs. Siemens Brothers and Co., Ltd., Calcutta, and Messrs. W. T. Henley's Telegraph Works Co., Ltd., Calcutta, and Messrs. J. C. Karaka & Co., Bombay, Nos. 340—341 and 360, dated the 12th and 22nd June, 1931.*

I have the honour to acknowledge receipt of your letter No. GC/ET—CRB/BG, dated 6th June, 1931. The Board observes that you have not had sufficient time to formulate the representations which you wish to make and in order to save further delay I am to ask you to be good enough to furnish replies to the following questions. I am to say that these questions represent specific points upon which the Board requires information and it is hoped that you will supply as full information as possible. Where you express an opinion the Board wishes you to quote all evidence and data upon which the opinion is based. At the same time the Board will be glad to receive any statement you may wish to make or any information which may be at your disposal on points not covered by these questions.

2. The points upon which the Board would be glad to have specific replies are as follows :—

I. (i) The Indian Fiscal Commission (1920) laid down that any industry claiming protection should satisfy three primary conditions—

- (a) that the industry should possess natural advantages such as an abundant supply of raw material, cheap power, a sufficient supply of labour or a large home market;
- (b) that the industry must be one which without the help of protection either is not likely to develop at all or is not likely to develop so rapidly as is desirable in the interests of the country;
- (c) that the industry must be one which will eventually be able to face world competition without protection.

Do you consider that the industry now under enquiry fulfils these conditions?

(ii) With regard to the supply of copper the Indian Cable Company, Limited, state that there is an abundant supply of copper ore at Ghatsila, 18 miles away from the Company's works, which under favourable conditions might be utilised for the manufacture of electrolytic copper rod. Have you any knowledge of this supply of copper and do you consider that can be used as contended by the Indian Cable Company, Limited?

II. The Indian Cable Company, Limited, have made the following specific suggestions :—

- (a) The levy of an import duty of 10 per cent. on all electrical conductors whether insulated or uninsulated over 1/80th square inch in cross-sectional area other than paper insulated cables which the company cannot manufacture, the duty to remain in force for five years.
- (b) Alternatively the levy of an import duty of 15 per cent. on the articles specified above, the duty to be in force for three years.

(a) A specific duty on small rubber insulated cables of sizes 1/044 to 7/052 as detailed in the schedule below—

Size.	Braided Cable.	Lead covered Cables.		Tough rubber sheathed Cable.
		Single.	Twin.	Single.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1/036 . . . . .	1 0 0	2 8 0	2 12 0	..
1/044 . . . . .	1 0 0	2 8 0	3 0 0	2 0 0
3/029 . . . . .	1 0 0	3 0 0	4 8 0	2 4 0
1/064 . . . . .	1 4 0	3 0 0	5 0 0	2 8 0
3/036 . . . . .	1 4 0	3 8 0	6 10 0	2 8 0
7/029 . . . . .	1 8 0	5 0 0	7 12 0	3 0 0
7/036 . . . . .	2 0 0	6 0 0	9 0 0	3 4 0
7/044 . . . . .	2 8 0	..	..	4 0 0

NOTE.—Unit on which the specific duty is to be levied is not stated.

What is your opinion regarding the above claim of the Indian Cable Company, Limited? Kindly make all criticism as detailed as possible.

- III. Please prepare a detailed estimate of the additional capital expenditure which would be required in the case of (i) any hydro-electric project and (ii) any Municipal electric supply scheme for which you are in a position to supply figures if it were decided to accept the above proposals for increasing the duty on (a) both insulated cables and bare conductors and (b) bare conductors only. To what extent would it be necessary to raise the price of electricity to consumers?
- IV. To what extent would the proposals, if accepted, affect the cost of telegraph and telephone wires and cables?
- V. In what classes of electric wires and cables are you interested and to what extent do they come into competition with the products of the Indian Cable Company, Limited.

- VI. Please furnish a statement showing the prices of (i) any bare hard drawn electrolytic copper wires and (ii) any rubber insulated cables, not less than 1/80th square inch in cross-sectional area, recently imported by you. The statement should give full particulars regarding the classes and sizes of wire or cable for which prices are given and the prices should be shown under the separate headings, c.i.f., landing charges and duty.
- VII. If prices realised by the Indian Cable Company have been lower than corresponding import prices, please explain the reason for the difference. Illustrate your answer if possible by specific instances.
- VIII. Do you consider the Indian Cable Company's works sufficiently large as an economic unit of production and their machinery and equipment sufficiently up to date and efficient?
- IX. What is your opinion of the cables and wires manufactured in India as regards quality and price as compared with corresponding imported wires and cables?
- X. Are there any markets in India in which, owing to their distance from the ports, the Indian Cable Company are more easily able to compete with the foreign manufacturer? If so, please state which those markets are and the approximate annual demand in each.
- XI. Is it likely that the Indian demand will increase substantially in the near future? If so, what are the reasons for your belief?
- XII. What do you estimate to be the market in India at present as estimated (a) in quantities. (b) in values of the following:—
- (i) Rubber insulated wires and cables—
    - (a) less than 1/80th square inch in sectional area,
    - (b) not less than 1/80th square inch in sectional area.
  - (ii) Bare copper wire other than telegraph and telephone wire—
    - (a) less than 1/80th square inch in sectional area,
    - (b) not less than 1/80th square inch in sectional area.
  - (iii) Telegraph and telephone wires and cables—
    - (a) less than 1/80th square inch in sectional area,
    - (b) not less than 1/80th square inch in sectional area.

3. I am to ask that the reply to this letter with five spare copies may be sent as early as possible and in any case not later than July 20th. It should be addressed to the Secretary, Indian Tariff Board, 1, Council House Street, Calcutta.

**Messrs. Siemens Brothers & Company, Limited, Calcutta.**

*Letter dated the 3rd July, 1931.*

In reply to your letter 341/C.-12 of the 12th of June regarding the application by the Indian Cable Co., for further protection to the manufacture of rubber insulated cables and bare copper wire,

- (1) The industry does not possess the natural advantages of an abundant supply of raw materials.

Electrolytic copper for drawing wire must at the moment be imported from America.

Lead must be imported, also cotton yarn of the counts required for braiding.

In view of the disadvantages named above, the additional disadvantage that the Indian Cable Co.'s factory is situated nearly 200 miles from the nearest seaport we cannot see how it can possibly compete with world competition except perhaps in Calcutta. We are definitely of the opinion that as far as Madras, Bombay and Karachi areas are concerned, freight rates from Tatanagar to these places would stand in the way of their competing with world prices.

- (2) From the Indian Cable Co.'s application we understand that their principal manufactures fall under 3 heads as regards assessment to duty and for which they are applying for protection.
  - (a) Rubber insulated electric wires and cables of less than 1/80th of a square inch sectional area—assessed at 20 per cent. *ad valorem*.
  - (b) Rubber insulated electric wires and cables of area 1/80th part of a square inch sectional area and larger—assessed at 5 per cent. *ad valorem*.
  - (c) Bare copper wires of area 1/80th part of a square inch sectional area and larger—assessed at *nil* duty.

As regards the class of wire under A, this is used practically exclusively for house wiring and as far as we can ascertain the Indian Cable Co. have in the past made every endeavour to manufacture cable of this class in India equal to the C. M. A. grade, in other words to the standards of the British Cable Makers' Association known under the registered trade mark "C. M. A.". We believe that the Indian Cable Co. have published certificates indicating that this is the case and that the results of the tests have shown that their cables give the same laboratory tests. We have never seen however any statements by the Indian Cable Co., in which they compare their cable with C. M. A. cable. We think it would be well to point out that a rubber insulated cable, or for that matter any rubber insulated article, is unlike most manufactured goods in that a low grade and poor quality cable and a high grade quality cable have the same appearance to the uninitiated consumer but it is possible to make a low grade cable to have the same appearance as a high grade cable although the materials used in its manufacture are inferior in quality. The consumer of rubber insulated wires for house wiring purposes usually purchases his requirements through a wiring contractor who quotes a price per point for installing. The consumer therefore does not know the quality and has no way of ascertaining the material which is being installed for him by his contractor. It is of course possible that an inferior or low grade wire although after it has been installed for a few months is positively unsafe will test quite satisfactorily when first installed in an insulating casing. In view of the fact that a low grade cable will give the same test results when newly manufactured as high grade cable, there is no real test other than the test of durability. We understand that the Indian Cable Co. commenced manufacture of cables in 1923 but apparently there was some delay in placing cable on the market and no considerable quantity was sold until about 2 years after the commencement of manufacture. It would therefore appear that cables manufactured by the Indian Cable Co. have been on the market for a period of about 5 years. This however we do not consider the test of time as we know of numerous instances of buildings wired with C. M. A. wires as far back as 1908 and the wiring, as originally carried out is still intact and serviceable for many years more. We are interested in all the types of cable which the Indian Cable Co. manufactures and as importers of C. M. A. grade cables we are of the opinion that the present level of prices should show the Indian Cable Co. a reasonable profit. It should be remembered that importers pay overseas packing, harbour duties, freight, insurance, landing charges and import duty at 20 per cent. in addition to interest charges on capital laid out in carrying stocks. As against such charges the Indian Cable Co. import their principal raw materials free of duty.



Our experience has been that when the results of tenders have been published the Indian Cable Co.'s prices are usually somewhat below our prices for C. M. A. cables and as we can obtain a reasonable margin for profit we see no reason with the present level of prices why the Indian Cable Co. with a protection of 20 per cent. should not make ample profits. We consider it a grave inconsistency that while electrical machinery and power cables which go towards the electrical development of the country should be assessed free of duty that the wire which the consumer of current requires in order to assist the electrical development should be assessed at 20 per cent. duty.

We have shown above that as manufacturers of C. M. A. cables we only place products of the highest quality on the market. We have also shown that the Indian Cable Co. can and does underquote us for their highest grade product. It occurs to us therefore that what the Indian Cable Co. require is not so much protection as regards price against C. M. A. cable as protection against inferior quality cable which is being imported from continental manufacturers and which after a few months of installation is positively unsafe.

We contend that if the electrical development of India is to be on sound lines that the present large importations of low grade and inferior wires for house wiring purposes constitute a danger to the community where they are installed. The Indian market is essentially one of price and it appears to us that it is necessary to protect the public against unsafe wires and cables and in order to do this we consider it is necessary that all imported wires for house wiring purposes should be made to a specification having for its aim a high standard of quality. We understand that the Australian authorities realised this some years ago and arranged that all rubber insulated wires and cables coming into the country should be subject to test at the port of entry, and we submit that if tests to a standard specification were carried out at Indian ports on imported rubber insulated wires and cables, this would prevent the importation of inferior quality wires which would enable the Indian Cable Co. to secure the major portion of the business available which is now in the hands of manufacturers of inferior cables. We therefore do not agree with the suggestion made by the Indian Cable Co. under paragraph 2 of your letter, but suggest in place that an investigation should be made into the general position of the quality of imported wires and cables competing with the Indian Cable Co. If the duty is raised as is suggested by the Indian Cable Co. there will be a tendency for manufacturers of inferior cables to still lower the quality in order to compete thus rendering the position of the consumer worse than at present. We think we can safely say that it is almost certain if the duty is raised there would be an increase in the price of C. M. A. quality cables but an increase in price in this class of cable we suggest would not benefit the Indian Cable Co. as they must already be making an ample margin of profit on the cables they are now manufacturing to what they allege to be high grade cables. As regards cables now subject to a duty of 5 per cent. most of the sizes coming under this class are used for industrial power purposes.

We are of the opinion that the present level of prices for these cables are reasonable and as the Indian Cable Co. usually quote prices closely following those of C. M. A. importers we are convinced that the prices quoted must show them an adequate margin and if this is the case we do not see that they require any measure of protection at all. On the contrary we are of the opinion that they could in the interests of the consumers and industrial power users well afford on this class of cable to forego the existing protection and that it should be assessed at *nil* duty as in the case of paper insulated power cables.

As regards bare copper, in view of the fact that black copper rod must be imported from America the principal cost of the finished wire is the raw material. From figures we have seen in our own works the cost of the raw material represents something like 85 per cent. of the cost of the finished wire. The number of men engaged in drawing copper wire is so small that in the case of the Indian Cable Co. it could not effect more than a small number. We therefore consider that an import duty although it would benefit the Indian

Cable Co. would place an unjustifiable burden on all consumers and would tend to arrest the development of electric supply. Here again we would point out the fact that the Indian Cable Co.'s factory is so placed geographically that they could not possibly economically supply consumers in the south-west and north of India in competition with world prices.

We regret we are unable to give you any figures in reply to the remaining paragraphs of your letter as we have no definite information regarding the questions raised.

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**Messrs. W. T. Henley's Telegraph Company, Limited, Calcutta.**

A.—WRITTEN.

*Letter dated the 20th July, 1931.*

With reference to your letter No. 340/C.-13 of June 12th, and further to the last paragraph of our letter of June 24th, we now reply to your questionnaire to the extent of our information on the subject; the remarks to be read in conjunction with our letter referred to.

2. (I) (i) (a). The industry possesses no natural advantages. The principal raw materials, electrolytic copper, rubber and lead are all imported. Electrolytic copper from America (which at present supplies 90 per cent. of the world's total consumption), rubber from Ceylon or the Straits and lead from Burma. We think fairly cheap power is available at Tatanagar and a sufficient supply of labour. There is a good home market and the importations of rubber insulated wires and cables into India for the period April 1st 1930 to March 31st 1931 amounted to Rs. 36,90,827. The importations of hard drawn bare copper wire for the same period amounted to Rs. 21,85,172.

(b) In our opinion the industry can develop without any protection whatsoever and that the present partly revenue and partly protective duties which in fact constitute protection are not required.

(c) The industry in our opinion will be able to face world competition when consumers are satisfied that the products particularly rubber insulated cables have stood the test of time. The position of the Indian Cable Co. relative to their "C. M. A." importing competitors is similar to the position of the non "C. M. A." Companies manufacturing in England. They undersell the "C. M. A." makers stabilised prices by a small percentage and the published balance sheets show that they have a market and fill a want for cable cheaper than "C. M. A." grades.

(ii) We understand that the ores treated by the Indian Copper Corporation, chalcopryrite and pyrrhotite are not sufficiently rich to make it a practicable proposition to manufacture electrolytic copper rod particularly as electric power is unlikely to be available at a sufficiently low price. The whole position of electrolytic copper has been revolutionised by the discovery of the Northern Rhodesian Copper field and it is not possible for us to say what will be the position in two or three years time; it is however certain that the American monopoly of 90 per cent. of the world's total consumption of electrolytic wire bars will not be maintained. As long as the Indian Cable Co. import their black copper rod free of import duty we should consider that it will not be possible to make electrolytic copper in India to compete.

(II) (a) and (b). The paragraphs (a) and (b) can be taken together and divided into suggestions for an import duty of 10 per cent. or 15 per cent. on all electrical conductors insulated, and an import duty of 10 per cent. or 15 per cent. on all electrical conductors uninsulated; in both cases 1/80th square inch and larger. At present the duty on rubber insulated cables 1/80th square inch and larger is 5 per cent. and on uninsulated conductors nil.

*Rubber insulated cables 1/80th square inch and over.*

As pointed out in our letter of the 24th ultimo, the I. C. C. apparently follow the "C. M. A." prices, and despite the additional heavy charges of importers the margins for profit on these sizes are reasonable. We are prepared to produce our landed cost figures and selling prices to prove this on the understanding that they are confidential and not for publication. The larger a cable is the higher the cost of raw materials in it, which in large sizes can reach 80 per cent. and higher depending on the cost of raw materials. We contend that the present protective duty of 5 per cent. imposed as a result of the Tariff Equality Enquiry of 1928 is not necessary and that to increase this to 10 per cent. or 15 per cent. will place an unjustifiable burden on consumers and arrest the electrical development of the country.

Certain sizes say up to .06 square inch of rubber insulated cables are being imported into India of low grade and as we have pointed out in our letter of June 24th, the Indian Cable Co. require protection against such low grade importations which is also in our opinion necessary in the interests of consumers. This can only be done by a system of testing at Port of entry and the prohibition of low grade cable of these sizes; we will refer to this matter more fully when replying to query 2 (II) (c).

*Uninsulated conductors 1/80th square inch and over.*

Conductors can be either A. C. S. R. (aluminium conductors steel reinforced) or copper. As regards A. C. S. R. a duty would place a burden on consumers and to the extent of the duty would increase the price to consumers consequently arresting the electrical development of the country. We understand that the Indian Cable Co. can draw aluminium wire but conductors composed of aluminium wire alone are not now generally used. To make A. C. S. R. the Indian Cable Co. would have to import the steel strands as they are not manufactured in India and we have imported and erected in India many hundreds of miles of such conductors.

As regards copper conductors. As stated in our letter of June 24th, the raw material at the present very low price of electrolytic wire bars forms 83 per cent. of the cost of the finished wire. Highly skilled labour for wire drawing is not necessary and we submit that no protection whatsoever is required by the Indian Cable Co. against importers of copper wire to B. E. S. A. Standards. An import duty would certainly benefit the Indian Cable Co. but cannot be in the interests of the electrical development of India. We import bare copper wire to B. E. S. A. Standards only into all the principal ports of India but we cannot obtain remunerative prices owing to competition from copper wire of unspecified standards. We referred to this question of "quality" in our letter of June 24th, and if the Indian Cable Co. received protection against low quality copper they would then obtain remunerative prices and be able to compete readily in the Indian market.

India being essentially a price market, to a large extent the price of bare copper is regulated by the price of the lowest grade being imported. There are of course discriminating purchasers who specify and will accept B. E. S. A. Standard copper only; from such purchasers we can obtain remunerative prices as a general rule. It does not seem reasonable that to benefit a few dozen men employed in the wire drawing department of the Indian Cable Co. that the entire population of India should be penalised.

We should here mention "protected" copper wire for overhead line work, i.e., lightly insulated with compounded braids and similar types used in crowded Bazaar streets and for running through trees. Such wire is run on insulators in the same way as bare copper, and we can show that remunerative prices are obtainable for such wires and that no protection is required.

The question of bare copper wire of sections smaller than  $1/80$ th square inch and which is at present assessed at 20 per cent. duty is not mentioned by you. Very large quantities of such wire are required annually by the Posts and Telegraphs Department and the Indian Cable Co. have practically a monopoly. As wire drawing is a simple matter it is possible to estimate the cost of imported wire to a considerable degree of accuracy, and we see from published tenders that the Indian Cable Co. take full advantage of the 20 per cent. duty and just under-quote importing Companies. The result is that the Posts and Telegraphs Department have to pay about 20 per cent. more for their wire than they need do and the country obtains very little revenue as these sizes are but rarely imported, the reason being that it is not possible to compete with the Indian Cable Co. Is it desirable we submit that to benefit a Company employing a few dozen men in the wire drawing department that this great Government Department, the Posts and Telegraphs, should have to pay 20 per cent. more for their wire and this must arrest development. We consider that the duty on all uninsulated conductors whatever the size should be removed and the Indian Cable will readily be able to compete at any rate on the Western Side of India on the question of being able to give better delivery than importers.

(c) We can only express surprise that the Indian Cable Co. have not gone to the root of the trouble in that they are called upon to compete with low grade imported wires which constitute a menace and we dealt at length with this aspect in our letter of June 24th. It is correct that specific duties will assist the position but only to a small extent and in our opinion is hardly worth consideration until the much more important question of the regulation of imported wires and cables as regards *quality* is settled for the safety of the consumer.

It can be assumed that generally speaking the c.i.f. invoice cost of the low quality wires now being imported is about half the invoice cost of the "C. M. A." importations so that such importers are paying half the duty of the "C. M. A." importers. Assuming that specific duties are fixed on the present duty being paid by "C. M. A. importers then this would double the duty on the low grade wires and increase the selling price by  $16\frac{1}{2}$  per cent. always assuming that the low grade importers do not "cut" their quality which it is certain they will do; such an increase would not assist the Indian Cable Co. to any extent worthy of consideration.

Another difficulty regarding the suggested specific duties is that owing to the fluctuations of raw materials which form such a large percentage of the cost of a finished cable, the duties which may be reasonable to-day may be out of proportion to-morrow.

We attach schedule showing our latest invoice costs for the small sizes of braided cable, lead covered cable, single, twin and three core and tough rubber sheathed cables, single, twin and three core worked out as regards duty at 20 per cent. *ad valorem* to 100 yards. You will see that in some instances the suggested specific duties would increase our costs and in some instances decrease them. We trust you will look upon our invoice costs c.i.f. as confidential and not for publication.\*

We would once more emphasise that the root of the trouble is the present importations of low grade wires and cables with which the Indian Cable Co. are called upon to compete. We trust your report to Government in due course will contain a strong recommendation for an electrical committee to be appointed to consider introducing legislation to amend the Indian Electricity Rules as they now stand to prohibit the importation of unsafe wires and cables and a suggestion would be to increase the powers of the Local Governments under clause 40A. If this is done the Indian Cable Co. will not need any protection whatsoever and the present duties could be reduced to *nil* for the

general benefit of consumers and to assist the electrical development of the country.

(III) This is a point which can be more fully dealt with by the Secretary of the British Indian Electric Committee who we understand is putting up a protest on behalf of all the Electric Supply Coys. represented on the Committee.

(IV) As far as we can see the cost of telegraph and telephone cables would not be increased as long as the specific duties are not higher than importers of the British Indian Electric Committee who was understand is putting up a Department purchase almost exclusively from the Indian Cable Co. and do not purchase imported "C. M. A." wire to any extent. The Department however as for bare copper, is paying 20 per cent. more than would be necessary if the import duty was removed and the Country is obtaining no import revenue from the materials supplied by the Indian Cable Co. to the Department.

(V) We are interested in the manufacture of every type of wire and cable manufactured by the Indian Cable Co.

(VI) The statement asked for is attached and we trust it will be treated as confidential and not for publication.\*

(VII) We have no information.

(VIII) We are not in a position to say but from the published reports we should gather that the Company is overcapitalised, and also that the position of the Factory is not such as to give the best results.

(IX) Our letter of June 24th dealt with this point and it is not possible to give any opinion regarding quality until the cables have been in use for some 15 years or so. As regards price we see from the published results of tenders that the Indian Cable Co. usually underquote the "C. M. A." importing companies by a few per cent.

(X) The reply to this query is that we do not know of any markets in which the Indian Cable Co. are more easily able to compete with the foreign manufacturer.

(XI) The demand in India for all types of electrical conductors insulated and uninsulated is steadily on the increase due to the electrical development of the country. We append figures showing the value of importations of rubber insulated cables since 1922 taken from the statistical figures.

Year.	Rs.
1922-23 . . . . .	28,52,890
1923-24 . . . . .	27,16,214
1924-25 . . . . .	29,02,136
1925-26 . . . . .	37,14,825
1926-27 . . . . .	30,35,069
1927-28 . . . . .	33,23,400
1928-29 . . . . .	39,95,869
1930-31 . . . . .	36,90,827

\*Not printed.

Since 1923 must be added the total of the I. C. C. sales to obtain the figure for the total consumption. We do not know what the I. C. C. sales for the year April 1st, 1930 to March 31st, 1931 were but we estimate them at lacs 9 which would bring the total consumption up to lacs 46.

(XII) Any estimated figures we could give would be too vague to be of much service. Exact information is obtainable through the Customs Houses and we suggest reference to this Department. To the import figures obtained from the Customs must be added the Indian Cable Co.'s figures for their local manufactures.

Placing ourselves at your disposal for any further information you may require.

**MESSRS. W. T. HENLEY'S TELEGRAPH WORKS COMPANY,  
LIMITED, THE 'CABLE MAKERS' ASSOCIATION, MESSRS.  
SIEMENS BROTHERS COMPANY, LIMITED.**

**B.—ORAL.**

**Evidence of Mr. C. R. BLAND, recorded at Calcutta, on Saturday,  
the 22nd August, 1931.**

*President.*—Mr. Bland, you represent Messrs. W. T. Henley's Telegraph Works?

*Mr. Bland.*—Yes, I am their Manager for India.

*President.*—You are a member of the Cable Makers' Association?

*Mr. Bland.*—Henleys are members of the Cable Makers' Association. They were one of the founders of the Association in 1899.

*President.*—It has been in existence for over 30 years?

*Mr. Bland.*—Yes.

*President.*—Your point of view in this enquiry generally is that of the Cable Makers' Association: am I right in thinking that? I find you are one of the signatories of a letter that has come to us from the Indian Committee of the Cable Makers' Association.

*Mr. Bland.*—My views are essentially the same as those of all the "C. M. A." importers.

*President.*—Are all the cable makers members of the C. M. A.?

*Mr. Bland.*—No.

*President.*—Is there a large proportion of manufacturers who are outside the C. M. A.?

*Mr. Bland.*—They are not a great number.

*President.*—Would it be possible for you to tell us approximately, if you take the total output of cables and wires in England, what proportion of that would be represented by non-C. M. A. makers?

*Mr. Bland.*—I should think it would be quite small.

*President.*—An inconsiderable proportion?

*Mr. Bland.*—I am not in a position to say. Arising out of that I might draw your attention to a report on the Electric Cable Industry prepared by a sub-committee appointed by the Standing Committee of the Board of Trade and presented to Parliament in 1921 which is of great interest. I am afraid I can't give you a copy but it could be procured for a penny and from it you can get a good idea of what the C. M. A. have done and how they have benefited the cable trade on the sole principle of protecting the consumer.

*President.*—Could you leave a copy of this with Mr. Bozman, our Secretary, till next Tuesday?

*Mr. Bland.*—Yes, I will. It is difficult now to procure. I will leave this copy if it is returned to me afterwards; it will give you a lot of information regarding the principles of the "C. M. A." and what they have done.

*President.*—In India the Indian Cable Company are trying to make cables and wires up to the British Specification Standards.

*Mr. Bland.*—That is what I understand from published reports.

*President.*—They have had testing done both in their own works and through the Metallurgical Inspector of the Government of India at Tatanagar

and I think it is fairly clear that their products come up to the British Specification Standard. The point I want to put to you is this: assuming that is so, then the difference between their products and the products of the C. M. A. is that, while the C. M. A. products not merely satisfy the standards laid down by the British Association but also have proved their durability by reason of the fact that they have been in the market for over 30 years, the products of the Indian Cable Company not having been in the market for more than seven or eight years have yet to prove their durability. That would be a correct statement of the position?

*Mr. Bland.*—That is so.

*President.*—As far as standards are concerned probably there is no difference. And as far as testing in a laboratory would guarantee the quality, to that extent they are on the same footing as the "C. M. A."?

*Mr. Bland.*—Yes. It must be borne in mind that the standards of the C. M. A. are minimum standards. Another very interesting pamphlet which I could also give to the Secretary is on much the same lines as the report I mentioned previously and was issued at the British Empire Exhibition in 1924; it explains the reasons why the C. M. A. was originally formed.

*President.*—How long ago was that document published?

*Mr. Bland.*—These statements are facts known in the cable trade for over 30 years but in order to bring them to the notice of the public during the British Empire Exhibition in 1924 the C. M. A. issued this pamphlet. It gives a very good summary of the general aims and ambitions of the C. M. A. and its reasons for minimum standards. The Indian Cable Company when manufacturing cables may manufacture to a higher standard.

*President.*—That is perfectly correct. The claim has been made by the representative of the Indian Cable Company that some of their products really show a higher standard than C. M. A.

*Mr. Bland.*—That of course is possible and I think the majority of the members of the C. M. A. do manufacture above the minimum standard. As I have pointed out in one of my letters, laboratory tests give indications regarding durability but are not a test of durability and as such have only a limited function. The research of the members of the Cable Makers' Association has been to get durability taking certain minimum standards as can be obtained from laboratory tests.

*President.*—I understand that there is a working arrangement in regard to prices between the members of the C. M. A. in India and the Indian Cable Company. Is that correct?

*Mr. Bland.*—No. There is an arrangement between the C. M. A. makers to the extent that the competition among them is one of quality and service and not of price and the reason why they cannot make it one of price is that there is the great temptation in commercial competition to lower the price at the expense of the quality.

*President.*—Is it an arrangement amongst the members of the C. M. A.?

*Mr. Bland.*—Amongst their representatives in India. I think there are only eight of them.

*President.*—They have an agreement amongst themselves that competition is to be restricted to considerations of quality and service and not competition in respect of price?

*Mr. Bland.*—That is right.

*President.*—The position was different in 1927-28 because there was competition?

*Mr. Bland.*—The cable makers who are represented in India came to this arrangement on the 1st of May 1928.

*President.*—Since then there has been no competition as regards price amongst themselves?

*Mr. Bland.*—No.



*President.*—Therefore there is no arrangement in regard to prices between the British cablemakers out in India and the Indian Cable Company?

*Mr. Bland.*—None at all; the Indian Cable Company are not represented in the Indian Committee.

*President.*—Generally the prices as far as you know of the Indian Cable Company are slightly lower than the C. M. A.?

*Mr. Bland.*—I have come across cases where they have been higher. But these things are very difficult to ascertain; you have only got the usual statement of one's customers and as a rule people are loath to show you competition quotations. But I have come across cases where I have been fairly certain that the Indian Cable Company have quoted above the C. M. A. price.

*President.*—The point on which we want your advice is the question of the method of protection which may be adopted, assuming that the Indian Cable Company succeed in establishing a case for protection. Supposing it was decided to grant assistance to the Indian Cable Company, the proposal that they have made is that the assistance should be granted in the form of specific duties on cables generally of smaller sizes, and the difficulty that we feel with regard to that proposal is that if you levy specific duties on smaller sizes of cables, the difference in price with this additional duty of the Indian Cable Company's cables would still be so large that probably they might not reap any benefit from the protection.

*Mr. Bland.*—My view is that it will not assist them materially, that specific duties will not be of any great assistance; they will be a small assistance. What I contend the Indian Cable Company are up against is the really low grade cables that are being imported. My information is that they come from Japan, the Continent and England. I have seen as bad a cable as can be made coming from England, not of course from members of the C. M. A. who have a definite minimum standard. It comes from all countries and it does not by any means follow that it comes only from the Continent.

*President.*—If that is the position, that is to say the competition from which they suffer is really competition from low grade cables, then the only way in which protection can be made effective is by controlling low grade cables coming into this country?

*Mr. Bland.*—That is right.

*President.*—It is on that point that we want your advice. I will tell you the precise point of view from which we are looking at it. We are a Tariff Board and it is not our business primarily to recommend the enactment of sumptuary laws to the Government of India; our business is to recommend laws for the protection of Indian industries. But here is a case where the admission of low quality goods into the country not merely endangers public safety but also endangers the existence of the Indian industry. Therefore it is in that way that the Tariff Board is interested in the question of controlling imports of low grade cables. In order to make out a reasonable case for control we have got to establish that as a matter of fact actually low grade cables coming into this country do endanger public safety. Is it possible for you to give us any positive evidence which will establish that fact, that there are cables coming into this country the use of which would be really dangerous to public safety?

*Mr. Bland.*—That is largely a question of opinion. I have seen some cables which in my opinion would be unsafe to use. One has to take into consideration the conditions. So many people in this country in their own houses walk about with bare feet and a man with bare feet is in a far more dangerous position than a man with dry shoes on. That is a point which should not be overlooked. The very conditions of the country are such that as a rule the average Indian walks about in his house in bare feet, and it is this bare feet question which is a real danger because he stands a greater risk than a man who wears shoes. It is more important in a country like

India than in countries where there are carpets and wooden floors. India is essentially a country of stone or earth floors whereas Australia and England are places of wooden floors and carpets where you don't come in actual contact with the ground. You can have a severe shock as a result of bad installation work in England but here it is very much worse.

*President.*—Is there any other difference between India and, say, European countries which would make the question of control more important?

*Mr. Bland.*—Another condition is that India has a tendency to be a price market, more so than any other countries. I suppose it is largely due to poverty.

*President.*—It has a low standard of life?

*Mr. Bland.*—You can describe it as not having so much money to spend. All supply companies are now giving great attention to small consumers. Take the big scheme in the United Provinces. We have done a lot of work there and it is interesting to see how Government have taken electric light into small villages, a thing never dreamt of some few years ago and there the people all walk about in bare feet, and from that point of view it is very essential to protect the consumer in this country.

*President.*—Is there any difference in climatic conditions which makes the question more important?

*Mr. Bland.*—It is due to climatic conditions that they walk about in bare feet. They walk about in bare feet in Burma but there the floors are largely wooden. It is an unusual thing to see any wooden floor in India and from that point of view you need to protect the consumer more than you would in European countries.

*President.*—I will ask you to consider this question with reference to England. In England you have got a small proportion of cable makers who are not in the Cable Makers' Association who might therefore make their goods of any standard they like?

*Mr. Bland.*—They can.

*President.*—And at the same time I understand there is no restriction with regard to imports of continental cables into England?

*Mr. Bland.*—Except under the Merchandise Act. There is I think a certain restriction under the Merchandise Act that they have to have a marked tape on the cable, so that a man may know what cable he is buying. Recently I understand a bye-law has been enacted that every importer of cable must mark the name of the manufacturer of the cable on the tape; he has always had to mark on the package the country of origin. When the cable is put into commission on the walls that record is lost, but now I am fairly certain that they are insisting on cables having a mark on it that can be recognized on the tape.

*President.*—Apart from Australia is there any country which has found it necessary to take up the question of controlling the importation of cables?

*Mr. Bland.*—New Zealand has also framed some rules and regulations.

*President.*—Is there any practice analogous to that in European countries?

*Mr. Bland.*—I don't know. I think it is done by tariffs.

*President.*—That is a different matter because tariffs do not necessarily apply to particular classes of cables.

*Mr. Bland.*—No, they do not.

*President.*—What I am trying to suggest is this: take a country like Belgium or Germany. We get some very low class cables from these continental countries. Do they make that sort of cable for their home market as well as for the export market?

*Mr. Bland.*—My information is that it is entirely for the export market, made down to a price to suit the Indian importer.

*President.*—Would you be able to substantiate that?

*Mr. Bland.*—I can't.

*President.*—I understand from some papers which have come in to us that in Germany and some other Continental countries the usual voltage in electric supply schemes for house wiring purposes is 115 and out here it is 220 or 230.

*Mr. Bland.*—That is right but the Continent is changing.

*President.*—Our practice is based on the British practice?

*Mr. Bland.*—Yes. My information is that the Continent is changing in the direction of a higher voltage. The reason being that the low voltage lamp is not a good lamp.

*President.*—If that is their practice in Continental countries, if their voltage is 115 and supposing they make cables suitable for a voltage of that kind while our voltage is 220, if those cables are used for our voltage obviously there would be serious danger?

*Mr. Bland.*—Yes. My information is that the class of cables they generally use, for example, in Germany, where they run their whole business on scientific lines, are of a better class than that which they send out to India. The voltage generally before the war in Germany was 115 but I have heard that they are gradually changing their voltage.

*President.*—Have you any figures with regard to the quantities of Japanese exports?

*Mr. Bland.*—They can be obtained from the Statistical Reports.

*President.*—I think they group other countries together. They give separate figures for Germany and Belgium and lump all other countries together.

*Mr. Bland.*—I have got figures regarding imports into Bombay and Calcutta.

*President.*—You sent us an extract from the Indian Trade Journal with regard to the action taken by the Government of India under the Merchandise Marks Act.

*Mr. Bland.*—Yes, an extract from the Bombay Chamber Proceedings.

*President.*—A certain amount of control was exercised by the Government of India under the Merchandise Marks Act for about three or four years.

*Mr. Bland.*—That is right.

*President.*—There the question was simply whether people who send cables into India with the label guaranteed to C. M. A. standard, had to prove by submitting to actual test that the guarantee was genuine. That was the position?

*Mr. Bland.*—Yes.

*President.*—And then the Government of India found that it was *ultra vires* of the Merchandise Marks Act.

*Mr. Bland.*—They said so.

*President.*—If action could not be taken by the Government of India under the Merchandise Marks Act, could the Government of India take action under the Indian Electricity Act? Have you considered the question?

*Mr. Bland.*—Yes, I have. They could do something under the Indian Electricity Act. As regards clause 40-A, that is the clause which gives a loophole to enable them to do something. I was on a Committee of the Bengal Chamber that considered this regarding the precautions to be adopted by consumers and owners, electrical contractors and electrical workmen. To the best of my knowledge, wiremen are licensed by only one Government in India and that is Bombay which is in advance of Calcutta to that extent. Wiremen in Bengal are not licensed and anybody here can do wiring work anywhere. That is not the case in Bombay. Bombay has advanced. The

Bengal Chamber have pressed the Government of Bengal on several occasions to bring this rule into force and they have always said they had no money and it could not be done.

*President.*—When the Government of India made rules under section 37 of the Electricity Act, are not those rules binding upon the Local Governments or is it left to the Local Governments to put the rules in operation?

*Mr. Bland.*—The rules have to be brought into force except 40-A which is a new rule. I think it was included in the 1928 edition of the Act.

*President.*—The rule is “No electrical installation work, including additions, alterations, repairs and adjustments to existing installations, except such replacement of lamps, fans, fuses, switches and other component parts of the installation as in no way alters the capacity and character of the installation, shall be carried out upon the premises or on behalf of any consumer or owner “and so on”. “This rule shall come into force in any province or part thereof on such date as the Local Government may by notification in the local official Gazette appoint.”

*Mr. Bland.*—Under the rules at present in Bengal if I want to put an extra point in my house being an Electrical Engineer I put it in. If that rule was in force, I would be liable to a fine up to Rs. 500 unless I applied to a licensed contractor.

*President.*—If this rule was enforced by the Local Government, then it would be the duty of the Local Government to prescribe the standard.

*Mr. Bland.*—Yes and of course the advantage would be that they can lay their hands on people who are doing wiring work. Nobody else can do it except the licensed contractor. They then know the names of people who are understanding the wiring of houses. That is a step in the right direction. You have then got a complete list of the names of qualified contractors and obviously they can obtain a better price for their work as they do in Bombay. There is keen competition to get on the contractors' list in Bombay.

*President.*—Is it your suggestion that if every Local Government in India enforced this rule, then the situation would be sufficiently remedied?

*Mr. Bland.*—No. It is only a step in the right direction that you lay down standards, so that to begin with a licensed man who is wiring premises at any rate appreciates the position of good and bad cable. He is not any maistry. He is a man who has had a certain amount of training and education and as time goes on, he will get more experience and better education. At the present moment there are a good many contractors in Bengal and they say “what are we to do? Anybody can come along and wire a house with the cheapest cable and how can we compete”. It is very difficult to convince a customer that it pays better to come to us. He is out to get something cheap.

*President.*—If that is only a first step, what further steps do you suggest?

*Mr. Bland.*—You mean if nothing can be done as regards the prevention of imports under the Merchandise Marks Act? Inferior cable would not come under the Merchandise Marks Act, because it can only come if it is stated as being equal to C. M. A.

*President.*—If you take section 37 of the Electricity Act under which the Government of India make these rules, assuming there was a case established for control at the port of entry, would it not be open to the Government of India under their rule making powers to lay down a rule for the purpose of getting imported wires and cables tested at the port of entry under the Electricity Act? Would it not be possible for the Government of India to do that?

*Mr. Bland.*—I think so.

*President.*—Is it a matter which your Association has ever considered or taken up with the Government?

*Mr. Bland.*—No, we have not taken it up with Government.

*President.*—The Governor General in Council may make rules for the whole or any part of British India to regulate the generation, transmission, supply and use of energy and, generally, to carry out the purposes and objects of this Act. Such rules may among other things provide for the protection of persons and property from injury by reason of contact with, or the proximity of, by reason of the defective or dangerous condition of, any appliance or apparatus used in the generation, transmission, supply or use of energy.

*Mr. Bland.*—They have got a case under that. The power appears to be there. As I have pointed out, all that you can do at a port is to test and that is a laboratory test and nothing else. A laboratory test has only a limited function. It helps only and it is not the end of it. First is the question of a laboratory test which need not be too high. That would be the start. Then we go on to clause 40-A as to having licensed wiremen. Nobody is allowed to wire a house unless he is licensed by Government. That is, he is a man with a certain amount of training. Then we can go a step further and see the question of the Supply Company's connection—precautions against leakage before connection.

*President.*—Rule 23 says "A licensee shall not connect the conductors and fittings on a consumer's premises with his works unless he is reasonably satisfied that the connection will not at the time of making the connection cause a leakage". That is binding on all local Governments.

*Mr. Bland.*—It is binding on the licensee. The licensee here for instance is the Calcutta Electric Supply Corporation. They are first class people. I should imagine that there is not another company in India of the type of the Calcutta Electric Supply Corporation, which is run on very sound lines. They have their own tests. To what extent they literally follow Rule 23, I am not in a position to know. One of my difficulties is that Henley's don't do wiring work. We supply cables and wires and undertake big contracts such as the G. I. P. Rly. Electrification. But as regards wiring we don't do anything at all, and so my knowledge of what takes place when the Supply Company connects up is somewhat limited. As to what extent they enforce Rule 23 I have often wondered.

*President.*—The question of licensing wiremen is a matter for the Local Government.

*Mr. Bland.*—Yes.

*President.*—And here as regards Rule 23 the control is exercised through the licensee, the Corporation.

*Mr. Bland.*—Here it would be the Calcutta Electric Supply Corporation. I have often wondered what these small Companies do in up country stations. We have put up many overhead installations in Jhansi and Gorakpur for instance which are entirely Indian owned and run. I do not know what they do. In each case they came to us for the distribution and we have given them a first class job. We put up the whole distribution for them and now they are running it. I have often wondered to what extent they take cognisance of the Rule as regards consumers' connections.

*President.*—Supposing it was arranged to test at the port of entry, would that be a very expensive business?

*Mr. Bland.*—Not very.

*President.*—I suppose it simply means installing a laboratory with somebody to perform the test.

*Mr. Bland.*—Yes, but that is not the end of the matter. I would like to emphasise very emphatically that this only a beginning, because a laboratory test has a limited function.

*President.*—In the last resort the only test is the test of experience?

*Mr. Bland.*—Yes. I have seen C. M. A. cables installed in Government buildings for 20 years. I had some sent to me not long ago which it was

stated had been in a Government building for 14 years and was asked how much longer it was going to last. I sent the sample home and they said that the rubber was a bit short. The sample showed that it had been installed for some considerable time. The Head Office estimated that after 6 or 7 years it would be necessary to rewire that building. The majority of the C. M. A. cables will be the same. Suppose a man had paid three times the cost of any low grade cable, would it not have paid him?

*President.*—Yes, if one were to take a sufficiently long view.

*Mr. Bland.*—Yes, as you say if a customer takes a sufficiently long view, it is so difficult to make people understand that point of view and rewiring a house is expensive. It is a dreadful business. That is not the end of it. It is the trouble and the inconvenience one is put to.

*President.*—Is there any other suggestion that you can make on this question of the method of control?

*Mr. Bland.*—There are three suggestions. Find some form of testing but this is not by any means the end of it. Then Rule 40-A has to be applied and as the contractors get educated, the standard has to be raised. My experience is that there is a good class of maistries in India. We have got men who when they joined us didn't know how either to read or write. Now they are able to read and write English. I send them out on contract work and pay them up to Rs. 200 a month. My experience is that this class of man is responsive to teaching. You can gradually raise the standard. The standard to start with might not be too high. As you get more contractors coming in, you can slowly raise the standard. Probably you will have to have a low standard in the beginning to put a man on the licensed contractor's list. The point is that you must keep on raising the standard all the time as you get the sons of these men coming along. As you know these people put their sons into the same job. The son is always better educated than the father. It is always on the upward grade. There are so many good class maistries and as you know, some of them are very good.

*President.*—Testing at the port, Rule 40-A and Rule 23. These are the three means that we have.

*Mr. Bland.*—That is how I look at it. These are the three means to help the country in the development of electricity generally each one interdependent on the other.

*President.*—Are you feeling, in regard to prices the competition of Continental cables?

*Mr. Bland.*—Yes.

*President.*—Is it quite impossible for you to come to an arrangement with some leading Continental importers with regard to these things?

*Mr. Bland.*—I don't think so. It is outside anything that I can say. The British have founded the cable trade and C. M. A. is the standard throughout the world and the Continental people put on their cable "equal to C. M.A." The British Cable Manufacturers built the cable trade.

*President.*—I was wondering if you take a leading German manufacturer like Messrs. Deutsche Kabelwerke—they send a lot of cables out to India—whether the position in India in regard to prices at any rate might not be better if there was some arrangement between you and them.

*Mr. Bland.*—They don't sell their good class cables cheaply. But they don't sell that cable to the public. The C. M. A. make not below a minimum grade. Continental people make many grades. Now they are making what you might describe as the I. S. D. grade. That cable has passed the laboratory test of the I. S. D. The I. S. D. knows as well as we do that such tests have a limited function. They do everything however that it is possible to do.

*President.*—If there was any question of control, then it would not be a case of controlling the class of cables that come from any one country?

*Mr. Bland.*—No.

*President.*—Because good class cables come from all countries and low class cables come from all countries.

*Mr. Bland.*—Yes, Messrs. Deutsche Kabelwerke are able to produce good class cables. They are proud of it in that they have their name on the tape. They are making it to the I. S. D. standard. But, as I see the matter, they don't like doing it particularly, because they can't make very much money. In England C. M. A. cable is a mass production product and, as I pointed out in my letter, the amount of labour in a cable is not very large. We know that Continental and Japanese labour is cheaper than British labour. I always hold the view that against the fact that Continental labour is cheaper must be set the fact that in England "C. M. A." cable is a mass production product.

*President.*—It is not standardised?

*Mr. Bland.*—It is not intended for use in their own buildings in Germany. They do not want that cable. It is manufactured specially for the Indian Stores Department to compete with "C. M. A."

*President.*—It is practically the same kind of thing as you have in steel. You can get Continental steel made to British standard specification.

*Mr. Bland.*—Yes. They print their name on the tape of the cable. It passes the laboratory test laid down by the Indian Stores Department. It is only recently that they have been able to produce a cable which could pass the tests. They have been at it for a long time. That information can be supplied by the Indian Stores Department. One hears a lot of things, but to what extent they are true one cannot say. This much can be said that they have had to put in a lot of years to produce a cable which could pass the I. S. D. tests and they have been successful in their attempt.

*President.*—How long has it been on the Indian market?

*Mr. Bland.*—They have got the contract only for one year, so that one really could not say.

*President.*—This is what is called Deka cable?

*Mr. Bland.*—Yes. The Indian Stores Department have done everything they can to see that it is a good cable.

*President.*—Is this question of low quality as important in the case of bare conductors as in the case of cables? Do you get unduly low quality bare conductors?

*Mr. Bland.*—I do not know to what extent India is getting them now. But I had a lot of trouble with such cables during the war in Mesopotamia. I never saw anything like it before. I did not know where Government got it from. I know what the troubles can be with low quality bare conductors because I have had experience of them.

*President.*—The point that has been suggested to us is that if you make copper conductors of low quality there is not very much in the way of economy in cost that you can get by it because the material (copper) is such a very large proportion of the cost.

*Mr. Bland.*—Except the whole art of drawing is the number of dies it is put through. It is a question of working the copper. That is what costs money.

*President.*—Therefore the difference would be simply between large and small sizes and not between high quality and low quality.

*Mr. Bland.*—No, between all sizes. For instance if you are going to make a small wire for service work, you draw that from a certain sized rod. The Indian Cable Company can give you much more information on that point than I can do. If you draw the rod through so many dies you will get the quality you want.

*President.*—I quite understand that. Supposing you have got one quality of No. 10 gauge wire and another quality of No. 10 gauge wire, if both are No. 10 gauge, then it means in each case practically the same amount of drawing?

*Mr. Bland.*—I don't think so. You can buy your black rod of any size you like. You can buy a size a little larger than No. 10 and pull it through one die, to take an extreme case.

*President.*—Would you mind my asking Mr. Leake?

*Mr. Bland.*—Not at all.

*Mr. Leake.*—It is possible to draw No. 10 wire from a rod which is slightly larger than No. 10. The wire will have a bad surface which will bring down the strength. Take No. 10 for instance. That would be drawn from  $\frac{1}{4}$ " or  $\cdot375$ " diameter rod. It will go through 9 dies—each hole separately. According to the British standard specification it will go through 9 dies.

*President.*—If you take a normal case, what would be the difference in cost between drawing done automatically and drawing done in stages?

*Mr. Leake.*—Two men at a time. . . .

*President.*—If you take the total cost of a copper wire, it would be a small proportion?

*Mr. Leake.*—Raw materials form 85 per cent. of the value of wire.

*President.*—You might save only 2 per cent. off the 10 per cent.

*Mr. Leake.*—Yes.

*President.*—The risk is much greater than in insulated cables?

*Mr. Bland.*—Yes. I can visualise a crowded bazar and a low quality over-brittle wire breaking at a slanting point with serious consequences.

*President.*—From the point of view of public safety, a bad copper wire may equally be dangerous, but from the point of view of protection to an Indian industry a manufacturer is not tempted to make the quality worse in the case of copper wire because he cannot hope to economise a great deal in cost. He cannot do so to the same extent in the case of copper conductors as in the case of insulated cables.

*Mr. Leake.*—That is right, if it is electrolytic copper but not merchant copper.

*President.*—Is that done?

*Mr. Leake.*—It can be done. We can only find that out by testing. If it was drawn from merchant copper it would be perfectly easy to ascertain whether it was drawn to certain specifications.

*Mr. Rahimtoola.*—Mr. Bland, I want to know whether there is any Importers Association in India. You say that all the importers of the Cable Manufacturers Association are able to sell at one price?

*Mr. Bland.*—We sell at one price.

*Mr. Rahimtoola.*—Is there an Association of importers in India?

*Mr. Bland.*—Only C. M. A. Importers.

*Mr. Rahimtoola.*—I am talking of C. M. A. importers.

*Mr. Bland.*—The competition between them is one of quality and service and not one of price.

*Mr. Rahimtoola.*—I am asking you whether there is any duly constituted Importers Association in India? Just as you are importing, there must be many others.

*Mr. Bland.*—A number of "C. M. A." makers are importing.

*Mr. Rahimtoola.*—I want to know whether there is any contract between you.

*Mr. Bland.*—The contract between us is as regards selling prices and the competition is, as I say, one of quality and service and not of price.



*Mr. Rahimtoola.*—There is no regular Association as such except that this question of price is settled by people who supply you these cables?

*Mr. Bland.*—The question of price is settled partly in London and partly here.

*Mr. Rahimtoola.*—I want to know how it is settled here.

*Mr. Bland.*—It is partly settled by recommendations here.

*Mr. Rahimtoola.*—I am not able to follow the point. You say that the question of price is settled partly in India. Unless you meet and discuss, I do not understand how it can be settled?

*Mr. Bland.*—We do discuss together.

*Mr. Rahimtoola.*—Is there any Association through which you come into contact with one another?

*Mr. Bland.*—We have a Secretary who calls us together whenever necessary.

*Mr. Rahimtoola.*—I am asking whether there is any contact in India because the prices, you say, are settled partly in India?

*Mr. Bland.*—The question of price is settled partly in India.

*Mr. Rahimtoola.*—You say that there is competition in respect of quality and service. May I know exactly what it means?

*Mr. Bland.*—The quality is known. The position is fairly clear in India now.

*Mr. Rahimtoola.*—Is it not a fact that there is a minimum test?

*Mr. Bland.*—Not a minimum test. The exact expression which the C. M. A. themselves use is:—

“The Association was formed having for its primary purpose the definition of standard qualities below which the adhering firms agreed not to go.”

*Mr. Rahimtoola.*—That means you can import anything above that quality and when the quality is higher or lower, the price is different.

*Mr. Bland.*—We should not import lower quality cables. We only import C. M. A. cables.

*Mr. Rahimtoola.*—Then how does the question of quality come in?

*Mr. Bland.*—I follow your point now. The quality of a cable is a question of its life. It is the durability or service people are going to get out of it. Dealers have different ideas on the subject. One man will say “I think that Calenders Cables give me the best service”. Another man will say “I think Siemens and so on”.

*Mr. Rahimtoola.*—In reality all cables are of the same quality?

*Mr. Bland.*—They are made to be not less than a minimum standard.

*Mr. Rahimtoola.*—You are now telling me that a particular brand is liked by a particular man. These particular brands are represented by many firms. Siemens are a firm, and so are Calenders who are importing these cables. Therefore if I have any house wiring work to do and buy cables from you which turn out satisfactorily, I will go to you. That does not mean that I would not get the same quality from another firm who is importing also C. M. A. cables.

*Mr. Bland.*—It does not follow.

*Mr. Rahimtoola.*—Where then does the question of confidence come in? The question of quality does not arise.

*Mr. Bland.*—Quality is only defined by the question of durability—the service which will be got out of it.

*Mr. Rahimtoola.*—Durability of C. M. A. cables—that is the test you want to apply to the Indian Cable Company's cables. That is the test which has stood the time so far as C. M. A. cables are concerned. Therefore everybody who is importing must know the question of durability.

*Mr. Bland.*—But it may not be known.

*Mr. Rahimtoola.*—People who are selling it know and the people who are buying according to you are educated classes, and therefore know. The only people who are buying Continental cables or low grade cables are illiterate people and they buy them through contractors.

*Mr. Bland.*—Not altogether, but a certain percentage.

*Mr. Rahimtoola.*—That is the statement made by you in your written representation.

*Mr. Bland.*—Not quite.

*Mr. Rahimtoola.*—Then, I want to understand this question of confidence in a particular firm.

*Mr. Bland.*—It is a question of durability, I should have said that some buyers think that some C. M. A. cables have a longer life in India than others.

*Mr. Rahimtoola.*—Others manufactured by C. M. A.?

*Mr. Bland.*—It might be.

*Mr. Rahimtoola.*—It is so.

*Mr. Bland.*—I do not know.

*Mr. Rahimtoola.*—So, the question of competition does not come in. The question of competition can come in only after experience in India.

*Mr. Bland.*—Yes.

*Mr. Rahimtoola.*—And you say you do not know.

*Mr. Bland.*—We have been selling C. M. A. cables in India for over 25 years.

*Mr. Rahimtoola.*—What is your experience of C. M. A. cables that come here at different times regarding durability?

*Mr. Bland.*—The majority of the C. M. A. companies have been importing into India for something like 25 years.

*Mr. Rahimtoola.*—They may be importing for 25 years. I want to know whether they have been tested at different times.

*Mr. Bland.*—The competition is one of durability or quality. That is a fact. But it is very difficult to say how it is found out because it can only be found out by experience or by passage of time. Supposing there is a big contractor, he will put Calenders cables into one building, the Indian Cable Company's cables in another, Henley's cables in a third and Siemens' in a fourth. He is not tied to any. He buys what he likes. Finally he comes to some conclusion that one cable is more durable than another. He might come to such a view.

*Mr. Rahimtoola.*—But there is no reason why he should.

*Mr. Bland.*—Except that he has found it out by experience.

*Mr. Rahimtoola.*—They are importing from the same firm in the sense that they are importing C. M. A. cables.

*Mr. Bland.*—By no means from the same firm. It is only not below a standard quality that C. M. A. companies are manufacturing. We do not know for instance exactly what Siemens put into their cables.

*Mr. Rahimtoola.*—That shows they are importing not the same quality?

*Mr. Bland.*—They are importing a cable which is made not below a minimum standard quality. That is all I can say.

*Mr. Rahimtoola.*—You do not know exactly what quality they are importing?

*Mr. Bland.*—No.

*Mr. Rahimtoola.*—May I know what exactly you are importing?

*Mr. Bland.*—We are importing cables made not below this standard quality.

*Mr. Rahimtoola.*—You are restricting yourself to the minimum grade?

*Mr. Bland.*—We are importing a cable which complies with not below the minimum tests and which we think will give the longest life in India.

*Mr. Rahimtoola.*—That is where the subtle differences arise?

*Mr. Bland.*—Yes. By looking at it you can tell nothing. The analysis of a rubber mixture is an extremely difficult matter—so difficult that it is almost impossible to say accurately. Rubber is a difficult substance. If Siemens cable is sent to me and if I am asked to say how it is made, I won't be able to say. Nobody can say except the man in the works. In our works in England our workmen do not really know what is put in and they do not tell me.

*Mr. Rahimtoola.*—Another point that I wanted to ask is regarding the Continental cables. The Indian Cable Company and I think yourselves are complaining about the inferior quality of the Continental cables.

*Mr. Bland.*—Not the Continental cables alone. There are many cables of low grade coming from other countries.

*Mr. Rahimtoola.*—I think that the Indian Cable Company have definitely made a statement that the main competition comes from the Continent?

*Mr. Bland.*—I agree that the low grade cables come mainly from the Continent but not entirely.

*Mr. Rahimtoola.*—The Indian Cable Company have mentioned that. But you go further and say that there are low quality cables coming also from England.

*Mr. Bland.*—There have been in the past. But I don't think that very much is coming in now.

*Mr. Rahimtoola.*—As far as that competition is concerned it is practically nil to-day.

*Mr. Bland.*—I have not seen much of it lately. There are many ports in India and it takes a long time to find that out. There are so many places of importations in India that it is difficult to say.

*Mr. Rahimtoola.*—If there are so many places of importations, test houses also in so many places will be necessary.

*Mr. Bland.*—A fair number will be necessary.

*Mr. Rahimtoola.*—What would be the number?

*Mr. Bland.*—There are five big ports—Karachi, Bombay, Madras, Calcutta and Rangoon.

*Mr. Rahimtoola.*—And there are some others.

*Mr. Bland.*—Cable is also imported through Kathiawar ports and brought into British India. It also comes through Goa.

*Mr. Rahimtoola.*—You want arrangements to be made for testing at all the ports?

*Mr. Bland.*—The importation of cables might be restricted to these five main ports.

*Mr. Rahimtoola.*—But that will not cover all the imports?

*Mr. Bland.*—It is only a suggestion.

*Mr. Rahimtoola.*—It is your opinion?

*Mr. Bland.*—It is a suggestion for getting over the difficulty—not necessarily my opinion but a suggestion.

*Mr. Rahimtoola.*—If it is a suggestion, I do not know how it can be worked.

*Mr. Bland.*—I have not thought over the matter.

*Mr. Rahimtoola.*—Supposing the Indian Tariff Board is feeling inclined to accept this point of view, it must know the practical difficulties that might have to be faced in enforcing it.

*Mr. Bland.*—You can take it that practically all cables come through the five main ports but not entirely.

*Mr. Rahimtoola.*—If you have not thought over the matter, I do not know how far we can consider your suggestion as a very serious proposition.

*Mr. Bland.*—Practically these five main ports are the only ones through which cables are imported into India. There are other ports at intervals. But you can say, can't you, that India has five main ports if you are asked geographically?

*Mr. Rahimtoola.*—There are innumerable places through which cables can come in.

*Mr. Bland.*—There are a number of ports, not innumerable.

*Mr. Rahimtoola.*—I want to know whether you have been able to ascertain from personal experience that there is actual danger to human life, if a man puts up a lower quality of cable. As you yourself have pointed out, there are a large number of illiterate people in India who have their house wiring done by contractors, and after the house wiring is over they have got to apply for connection to the electric supply company. Before the connection is given is there any test applied by these companies?

*Mr. Bland.*—They are supposed to apply a test, but whether it is done I do not know.

*Mr. Rahimtoola.*—Does not the responsibility lie ultimately with the electric supply company?

*Mr. Bland.*—No. As has been pointed out by Mr. Meares, really low grade and actually unsafe wire will, if installed during dry weather and in well-varnished casing and capping, often give a sufficiently high test to enable it to be passed as suitable for connection by the electric supply company concerned. The Electrical Adviser to the Government of India in his book on this Act states that an installation can be thoroughly bad but the supply company could connect it if it complied with the rules.

*Mr. Rahimtoola.*—As soon as the house wiring is ready do I understand that the electric supply company connects the power without any enquiry?

*Mr. Bland.*—Under clause 23 they have latitude.

*Mr. Rahimtoola.*—Then am I to understand that they don't observe the rules?

*Mr. Bland.*—I cannot say.

*Mr. Rahimtoola.*—That is a very serious point.

*Mr. Bland.*—That is a point on which the B. I. E. C. could give you the necessary information.

*Mr. Rahimtoola.*—So far as mere opinion goes the Board's position becomes difficult unless we have facts or complaints from those who have put up low grade wires.

*Mr. Bland.*—I can't get it, but I can only point out where the information could be obtained.

*Mr. Rahimtoola.*—You say it is a danger to life. I have been informed that the Electric Supply Companies do carry out an initial test before they give power, which implies that they observe the rules laid down in the Act. If that is strictly carried out do you think it would be satisfactory?

*Mr. Bland.*—No. As has been pointed out in one of our letters you could put in thoroughly bad wire in dry weather in well-varnished casing and get it passed by the electric supply company. What is going to happen when the rains set in and there is leakage all over?

*Mr. Rahimtoola.*—After all every man has got to observe a certain system of business if he wants to make money. One of the most important points which a business man has to observe is to gain the confidence of his clients in order to expand his business. Now, take a man like a contractor who has got to live on this housewiring business; it seems to me rather stretching the point too far to expect him to put in this cheap wire which will involve risk after six months and thus undermine his reputation as a contractor. There has

been an increase in the imports of these wires and I don't understand why people who have been using them have not noticed this defect?

*Mr. Bland.*—It is only certain continental makers' wires that we are talking about and these may last for two or three years where a better quality cable would last for 20 years. But the development has been really recent.

*Mr. Rahimtoola.*—We have seen graphs in connection with this matter and we find that the continental imports have gradually increased whereas there is a big drop in C. M. A. imports.

*Mr. Bland.*—That is true. But that only you might say within the last year and a half.

*President.*—Within three years there is this marked variation. The quantity of Continental imports were very inconsiderable before 1927. After 1927 there has been a marked decline in the British imports and marked increase in continental rubber insulated cables.

*Mr. Bland.*—There has been.

*Mr. Rahimtoola.*—Our difficulty is this. The Indian Cable Company are asking for prohibition of continental and other wires into this country or if they are brought in they should be brought in under a particular test which perhaps would amount indirectly to a sort of preference.

*Mr. Bland.*—There is no question of preference. They should be asked to make cables of a particular quality.

*Mr. Rahimtoola.*—Why should they be compelled to make a particular quality when they can prove that the present quality is good enough?

*Mr. Bland.*—It is not good enough.

*Mr. Rahimtoola.*—You have not got any definite data to prove that. You say at present that information cannot be had so that it is only a matter of opinion. This kind of vague statement won't solve the question.

*Mr. Bland.*—I can indicate where the information can be found. I say approach the B. I. E. C. They know what happens to installations after a few years. Suppose they find that in one particular quarter of Calcutta they are getting a heavy leakage, they go and investigate. They send their man and test that installation but probably leave the installation alone as long as the fuses are all right. They have power however under the Act to cut the man off if the leakage is excessive.

*Mr. Rahimtoola.*—Then why don't they do it?

*Mr. Bland.*—They are the people directly connected with it; it is not within my sphere to know that.

*Mr. Rahimtoola.*—I should have thought that it was in your interest to do a sort of propaganda as businessmen if those cables were really so bad.

*Mr. Bland.*—We do our best.

*Mr. Rahimtoola.*—The results are not very satisfactory!

*Mr. Bland.*—The results are satisfactory.

*Mr. Rahimtoola.*—The imports do not show it in any case.

*Mr. Bland.*—There may be other reasons.

*Mr. Rahimtoola.*—Which you are not able to place before the Board at present.

*Mr. Bland.*—I think the electric supply companies could give you a good deal of information as to what happens about leakage and so on. It is a troublesome matter to go to houses at any time of the day or night to replace fuses.

*Mr. Rahimtoola.*—You have stated at page 4 of your answers to questionnaire "we import bare copper wire to B. E. S. A. Standards only into all the principal ports of India but we cannot obtain remunerative prices owing to competition from copper wire of unspecified standards". From which countries do they come in?

*Mr. Bland.*—Both Japan and the Continent. We will draw nothing except to B. E. S. A. Standard and stamp it as such.

*President.*—Do bare copper conductors bear the C. M. A. mark?

*Mr. Bland.*—No. They have nothing to do with it. The C. M. A. deals with rubber cables and nothing else.

*Mr. Rahimtoola.*—You have made a suggestion on page 5 of your replies as follows:—

“ We consider that the duty on all uninsulated conductors whatever the size should be removed and the Indian Cable Company will readily be able to compete at any rate on the Western Side of India on the question of being able to give better delivery than importers.”

May I know exactly what you mean by this?

*Mr. Bland.*—It has been my experience on many occasions that the Indian Cable Company had got better prices than one offered for forward delivery for bare copper. They get a better price being on the spot.

*Mr. Rahimtoola.*—You think at present the removal of duty would not involve any hardship?

*Mr. Bland.*—The Indian Cable Company have got a big pull there owing to the advantage they have as regards delivery.

*President.*—You stock, don't you?

*Mr. Bland.*—Yes. We have got five offices in India.

*President.*—Then local delivery must be quite easy in your case?

*Mr. Bland.*—We have stocks, but there is a limit to what we can hold because it means locking up of capital.

*Mr. Rahimtoola.*—You say that it is not conclusively proved that the Indian Cable Company's products are equal to that of the C. M. A.

*Mr. Bland.*—It is conclusively proved that they are manufacturing not below a standard quality. As I say it is a question of test of time. The Indian Cable Company might naturally say “ we have undertaken intensive tests; we have been here for the last six years ” but it is for the customers to say whether it is so or not. It is due to the fact that this is a new industry that they are in this position which of course they can't help.

*Mr. Rahimtoola.*—From what I have heard, the tests, they have so far carried out, are quite satisfactory.

*Mr. Bland.*—I should imagine they are because the company have got some of the best brains in England to assist them. It is just inevitable that they should be restricted to the extent that their cable has not been on the market for 30 years as ours have.

*Mr. Rahimtoola.*—Another suggestion you make is that unless the copper coils are stamped there should be heavy penalties.

*Mr. Bland.*—If it is below the B. E. S. A. standard, we say that all coppers should be stamped as being of a minimum standard for safety purposes.

*Mr. Rahimtoola.*—And if it is not so stamped there should be heavy penalties?

*Mr. Bland.*—Yes if it is stamped and does not comply to the minimum standard. Japan and the Continent can quite easily manufacture these cables to the B. E. S. A. standard.

*Mr. Rahimtoola.*—It is not fair to penalize the consumer in order to satisfy a test which would favour the British article?

*Mr. Bland.*—You can't say that because the B. E. S. A. standard is recognized all over the world. America has its own standards but they are practically identical with the B. E. S. A. Standard. Look at the extensive use of copper in America: America would not adopt standards equal to B. E. S. A. if they did not consider it necessary to have such a standard.

*President.*—In India we are considering the question of prescribing standards; those standards will be prescribed in consultation with the Electrical Adviser to the Government of India and those standards may be any standard, British or American.

*Mr. Bland.*—Let it be their own standard; let it be Indian standard if they like. I have always felt that there should be some standard. The possible consequences of no standard wires put up in bazar streets make me shudder.

*Mr. Boag.*—Have you heard of any accident involving damage or injury due to the use of these unstandardised wires?

*Mr. Bland.*—I can't say I have, but that might readily happen.

*Mr. Boag.*—But you have not actually come across a case?

*Mr. Bland.*—I can't say that I have come across any case and I have known few deaths from electricity. There have been accidents. We had one curious class of accident in the Central Provinces. Our poles were very handy for people to see where their cows were so that when the time came to make the line alive we took every precaution we could and warned people not to go up the poles, but there were two little boys who decided that we were talking nonsense and they were killed.

*President.*—Does the Electrical Adviser to the Government of India publish annual reports?

*Mr. Bland.*—I should have thought that he does. We report accidents and so on.

*President.*—That of course has nothing to do with the kind of wire used.

*Mr. Bland.*—That is so.

## J. C. Karaka and Company.

### A.—WRITTEN.

(1) *Letter dated 16th July, 1931.*

In reply to your letter No. 360/C.-15, dated 22nd June, we have the honour to submit below our replies in order of the questions put by you.

(I) (a) The Indian Cable Co. have to rely at present absolutely on America, for all their requirements of Copper, which forms the Principal Raw material of a finished wire and it possesses no natural advantages of abundant supply of rubber and lead, which are other important Raw Materials required in the manufacture of Electric Wires.

It might be possible perhaps for them to get cheap power and a good supply of labour. A large home market there is, but the Geographical position of the Indian Cable Company's Factory cannot permit them to compete advantageously in the whole of India.

(b) Copper Wire which forms the essential Raw Material of the finished wire, is imported by them free of duty. Also rubber and lead, and therefore the present duty on imported wires and cables is a sufficient protection to the Company to develop its manufactures.

(c) Whether the Company will be able to face world competition, either with or without protection depends much on its own efficient and economic management. We are of the opinion that this industry can stand on its own legs with the present import duty which should be a sufficient impetus.

(II) We do not agree with the contention of the Indian Cable Co., that the supply of Copper ore at Ghatsila, under favourable conditions might be utilized for the manufacture of Electrolytic Copper rods. We are given to understand that this mine was worked by a certain Company, some years back and they found it impossible to work it at a profit. If this information is correct we are doubtful whether the Indian Cable Co. will be able to work the Ghatsila mine at a profit when the price of Copper is so low as at present. At present the world output of Copper is considerably in excess of consumption and we fail to understand how it would be possible to produce Copper at an economical figure. It would be against all economic principles to tax import of Bare Copper Wires, which amount to Rs. 21,85,172 per annum, in anticipation of working a Copper Mine and manufacturing Electrolytic Copper Rods. In this connection it may be interesting to find out (a) whether the Indian Cable Co. have got the required Capital to work the mine, (b) if they have worked out the figures at which copper can be produced, (c) what can be the yearly output from this mine, (d) how much of the production can they take up for the manufacture of Electrolytic Rods, (e) if they cannot take up the whole output, what do they propose to do?

(II) (a, b & c) The Indian Cable Company's suggestion to levy a duty of 10 per cent. on all electrical conductors, whether insulated or uninsulated over 1/80th square inch in cross sectional area, other than paper insulated cables for a period of 5 years or alternatively an import duty of 15 per cent. for a period of 3 years and a specific duty on small insulated cables of size 1/044 to 7/052 as detailed in the schedule given by you, is in plain English an attempt to totally stop the import of Wires and Cables in this country. It will in our opinion, expose the Hydro-Electro projects and the numerous Supply Companies at present operating in the country to the tender mercy of the Indian Cable Co. who obviously are aiming at profiteering.

The duty of 10 per cent. or alternatively 15 per cent. on insulated or uninsulated electrical conductors over 1/80th square inch in cross sectional area will effectively stop the progress of future electrification schemes



in India. Most of the small Supply Companies use overhead wiring for transmission and distribution purposes for which mainly bare copper wire is used and this represents 20 per cent. of the total Capital. Any duty therefore on these wires would mean that no new small Supply Companies can come into existence.

The specific duty on small rubber insulated cables suggested by the Indian Cable Co., we presume is per 100 yards. If the suggestion is adopted, it would mean an extra percentage (as shown in statement No. 1 enclosed herewith) in the cost of wires to consumers. After all, the chief factor is the consumer. If the cost of wiring installation is prohibitive it is not possible for a Supply Company to make any headway. There is already a duty of 20 per cent. on the class of wires above referred to and in the interest of civilization and progress, this duty should be at as low a level as possible so as to make it possible for the poor and rural classes to have the benefits of electricity and cheap power.

The Indian Cable Co. are getting at present for their Cables, prices which are very near to those obtained by C. M. A. importers, and statement No. 2 showing the confidential cost figures of our "Deka" Wires of sizes 1/80th square inch in cross sectional area and over, imported from Germany, enclosed herewith, will convince you that the prices obtained by the Indian Cable Co. must be giving them an enormous margin of profit. We also show in this statement, for comparisons' sake, the prices obtained by the Indian Cable Co. from the Indian Stores Department, this year.

In statement No. 3, enclosed herewith, we give you our c.i.f. prices for insulated "Deka" Wires of size 1/044 to 7/052, with landing charges and duty. We also show for comparisons' sake the prices obtained by the Indian Cable Co. for these wires from the Indian Stores Department this year.

(III) There are important Hydro-Electric schemes in the course of completion in the Punjab, United Provinces and Madras Presidency. In Western India there is already Tata Hydro-Electric Works. These Works form the nucleus of small Power Distributing Companies. Generally the distribution is done by overhead wires and for this bare copper conductors are needed. Therefore any further duty on insulated or uninsulated conductors over 1/80th square inch in cross sectional area, will materially affect the cost of promoting small Distributing Companies. It may be noted that the Distributing Companies are a chief factor in the development of electricity in India.

The suggested specific duty on small insulated wires will reflect in equal proportion in the cost of house wiring. It is essential that the initial cost of house wiring should be low, so as to make it possible, not only for the poorer classes but also for the middle classes to go in for electricity. The proposed duty in our opinion, will seriously check the progress in this direction and there will not be much scope for Distributing Companies.

(IV) Obviously the cost of Telephone Wires and Cables will increase in proportion of the duty levied. There is already a duty of 20 per cent. on this class of wires and cables. Cheap and speedy communication is the most important factor in commerce. The whole world is investigating methods to improve commerce and trade and the suggestion of the Indian Cable Co. is not only to stop development of inter-communications in India, but to paralyse the existing communications.

(V) We are Agents in India of Messrs. Deutsche Kabelwerks Akt-Gos., Berlin, and are interested in cables of all classes for Lighting, Traction, Telephony and Telegraphy. Our Wires and Cables are popularly known by the name of "Deka". While the low cost of Raw Material has enabled us to reduce our prices, the Indian Cable Co. notwithstanding heavy reductions in the prices of Raw Materials, have maintained their prices, which are fairly close to C. M. A. importers' prices, and which prices should be yielding them a very high percentage of profit.

"Deka" Cables during the past five years have made steady progress in India and the following Departments are under Annual Contracts for these cables as shown below:—

The Indian Stores Department, for the last four years.

The Bombay Electric Supply Company, Limited, for the last four years.

The Bombay Port Trust, for the last two years.

Madras Corporation, this year.

Calcutta Port Trust, this year.

We may also mention that the Government of India have made the following purchases of "Deka" Cables in the past two years:—

£1,926 Telephone Cables during 1929,

£4,500 Dry Core Paper Power Cables during 1930,

and have only recently purchased from us Telephone Cables valued about a lakh of rupees for the Telegraph Department.

These Cables are now being freely used with very great satisfaction by Military Engineering Services, Railways, Public Works Departments, Dockyards, Municipalities, Cotton, Woollen and Jute Mills, Native States, Power Houses, Supply Companies, etc., etc., throughout the whole of India.

(VI) In statement No. 4 attached herewith, we give the particulars you require of cables recently imported by us.

(VII) The prices realised by the Indian Cable Co. are very much higher than corresponding import prices of our "Deka" Cables and this fact is proved from our figures.

(VIII) The production of the Indian Cable Co. during the year ending 31st March 1930 amounted to roughly about Rs. 4,00,000 as against the total import from the different countries during the corresponding period amounting to Rs. 1,05,45,959. In our opinion the Indian Cable Company's Works is not sufficiently large as an economic unit.

(IX) The Indian Cable Company's wires and cables are not known on this side of India and we cannot therefore give our opinion regarding the quality of same. The Indian Cable Co. hold an annual contract from the Indian Stores Department and we presume from this fact that their wires and cables are up to C. M. A. Grade.

The Indian Cable Co., however, manufacture inferior quality of wires used generally for house wiring and these wires to our information sell well in competition with cheap foreign wires.

(X) To our knowledge, the Indian Cable Co. are competing favourably in the area round about their works. They have however not made sufficient efforts to sell their products in other parts of the country as the present capacity of their works is not sufficient to cope with the demand.

(XI) In our opinion the Indian demand will substantially increase in future, but it will necessarily depend on the cost of power and initial cost of wiring installations. As already stated before important Hydro-Electric projects are near completion and these will open up vast rural areas for electrification. No doubt very nearly all the important cities are already electrified but then the development of the rural areas have to follow.

(XII) We enclose herewith statement No. 5, showing figures of imports of electrical wires and cables during the last three years taken from the Government publication of Seaborne Trade and Navigation of British India for March 1931.

It is contended by the Indian Cable Co. that without protection the industry for manufacturing wires and cables is not likely to develop, the answer to it is obviously in the negative. Indian Cable Co. started work in 1921. By 1926 they were able to put their works on a proper working basis. From the figures (statement No. 6 appended herewith),

as announced by them in their annual reports they have been able to set off till the end of 31st March, 1930, no less than Rs. 5,54,460 as depreciation against plant and Rs. 4,55,149 against block account and still show a profit in the years 1926-1927—1929-1930. (The figures of 1931 are not in our possession.)

From these figures it is reasonable to infer that the present import duties offer sufficient protection, if any is needed and that there is no justification in penalising imported goods any further. We make bold to suggest that for the sake of progress, civilization and speedier development of important industries of national character and much more far reaching benefits to the country the import of foreign wires and cables should not be taxed at all. If protection is given to the manufacture of wires and cables on the principle of its being an indigenous industry it will have a retrograde effect on the rest of the indigenous industries, and will not therefore be in the interests of the country. Taking into view all the aspects of the question, we are firmly of belief that the industry in question does not fulfil the primary conditions laid down by the Indian Fiscal Commission and therefore it has no claim for protection.

We should be only too pleased to send up to Calcutta if the Board desires, one of our representatives, with a view to give evidence before the Tariff Board and to give them necessary assistance in their investigations.

STATEMENT No. 1 (a).  
V. I. R. TO B. E. S. A. SPECIFICATION.

—	1/044.	1/064.	3/029.	3/036.	7/029.	7/036.	7/044.
	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>	<i>£ s. d.</i>
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	2 4 3	3 9 0	3 0 0	3 17 0	4 19 0	6 11 3	8 19 0
Less—5 per cent.	0 2 3	0 3 6	0 3 0	0 3 9	0 5 0	0 6 6	0 9 0
	2 2 0	3 5 6	2 17 0	3 13 3	4 14 0	6 4 9	8 10 0
	<i>Rs. A. P.</i>	<i>Rs. A. P.</i>	<i>Rs. A. P.</i>	<i>Rs. A. P.</i>	<i>Rs. A. P.</i>	<i>Rs. A. P.</i>	<i>Rs. A. P.</i>
Exchange at 1s. 5½d. Landed Cost of Wires per 1,000 Yards.	28 6 3	44 4 6	38 8 6	48 8 3	63 8 9	84 5 3	114 15 0
For 100 Yards	2 13 6	4 6 9	3 13 9	4 13 6	6 5 9	8 7 0	11 8 0
Specific duty suggested by the Indian Cable Co. per 100 Yards.	1 0 0	1 4 0	1 0 0	1 4 0	1 8 0	2 0 0	2 8 0
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
<i>I.e.,</i>	34	28	25	25	23	23	21

STATEMENT No. 1 (b).

LEAD COVERS SINGLE TO B. E. S. A. SPECIFICATION.

	1/044.	1/064.	3/029.	3/036.	7/029.	7/036.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	6 3 0	7 12 6	7 4 3	8 8 3	9 15 3	12 9 6
<i>Less</i> —5 per cent.	0 6 0	0 7 6	0 7 3	0 8 5	0 9 9	0 12 6
	5 17 0	7 5 0	6 17 0	7 19 10	9 5 6	11 17 0
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Exchange at 1s. 5½d. Landed Cost of Wires per 100 Yards.	79 1 6	98 0 5	92 10 0	108 1 0	125 6 6	160 3 6
For 100 Yards	7 14 6	9 12 9	9 4 3	10 13 0	12 8 6	16 0 6
Specific duty suggested by the Indian Cable Co per 100 Yards.	2 8 0	3 0 0	3 0 0	3 8 0	5 0 0	6 0 0
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
<i>I.e.</i> ,	31	30	32	32	40	37

STATEMENT No. 1 (c).

LEAD COVERS TWIN TO B. E. S. A. SPECIFICATION.

	1/044.	1/064.	3/029.	3/036.	7/029.	7/036.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	10 2 0	12 16 0	11 15 0	14 4 3	17 1 0	21 6 0
<i>Less</i> —5 per cent. .	0 10 1	0 12 10	0 11 9	0 14 3	0 17 0	1 1 3
	9 11 11	12 3 2	11 3 3	13 10 0	16 4 0	20 4 9
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Exchange at 1s. 5½d. Landed Cost of Wires per 1,000 Yards.	129 11 9	164 6 3	150 15 0	182 8 6	219 0 9	273 10 0
For 100 Yards .	12 15 6	16 7 0	15 1 6	18 4 0	21 14 6	27 6 0
Specific duty suggested by the Indian Cable Co. per 100 Yards.	3 0 0	5 0 0	4 8 0	6 10 0	7 12 0	9 0 0
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
<i>I.e.</i> .	23	30	30	36	35	32

STATEMENT No. 1 (d).

TOUGH RUBBER SHEATHED SINGLE TO B. E. S. A. SPECIFICATION.

	1/044.	1/064.	3/029.	3/036.	7/029.	7/036.	7/044.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	3 7 0	4 15 0	4 2 0	5 1 0	6 4 3	7 17 0	10 14 6
Less—5 per cent.	0 3 4	0 4 9	0 4 1	0 5 0	0 6 3	0 7 9	0 10 9
	3 3 8	4 10 3	3 17 11	4 16 0	5 18 0	7 9 3	10 3 9
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Exchange at 1s. 5½d.	43 0 6	60 15 3	52 10 9	64 14 6	79 12 6	100 14 6	137 11 9
For 100 Yards	4 4 10	6 1 6	5 4 3	6 7 9	7 15 6	10 1 6	13 12 3
Specific duty suggested by the Indian Cable Co. per 100 Yards.	2 0 0	2 8 0	2 4 0	2 8 0	3 0 0	3 4 0	4 0 0
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
I.e.,	46	40	42	37	37	32	29

STATEMENT No. 2.  
To B. E. S. A. SPECIFICATION.

	V. I. Rs.				Lead Cover, Single.
	7/-064.	19/-044.	19/-052.	19/-064.	7/-064.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	15 18 3	20 16 9	27 0 0	39 5 7	27 2 0
Less—5 per cent.	0 16 0	1 0 9	1 7 0	1 19 4	1 7 0
Total	15 2 3	19 16 0	25 13 0	37 6 3	25 15 0
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
At Exchange <i>1s. 5½d.</i>	204 5 3	267 11 3	346 13 0	504 8 0	348 2 9
5 per cent. Duty	10 3 6	13 6 6	17 5 6	25 3 6	17 6 6
	214 8 9	281 3 9	364 2 6	529 11 6	365 9 3
2½ per cent. Landing and Clearing Charges	5 6 0	7 0 6	9 1 9	13 4 0	9 2 3
Landed Cost of Wires per 1,000 Yards	219 14 9	288 4 3	373 4 3	542 15 6	374 11 6
For 100 Yards	22 0 0	28 13 3	37 5 3	54 4 9	37 7 6
Prices obtained by Indian Cable Co. from I. S. D.	40 11 0	57 0 0	76 5 0	104 14 0	78 14 0



STATEMENT No. 3 (a).  
V. I. R. to B. E. S. A. SPECIFICATION.

	1/044.	3/029.	3/036.	1/064.	7/029.	7/036.	7/044.	7/052.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	2 4 3	3 0 0	3 17 0	3 9 0	4 19 0	6 11 3	8 19 0	11 13 0
Less—5 per cent.	0 2 3	0 3 0	0 3 9	0 3 6	0 5 0	0 6 6	0 9 0	0 11 9
	2 2 0	2 17 0	3 13 3	3 5 6	4 14 0	6 4 9	8 10 0	11 1 3
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Exchange at 1s. 5½d.	28 6 3	38 8 6	48 8 3	44 4 6	63 8 9	84 5 3	111 15 0	149 9 0
20 per cent. Duty	5 11 0	7 11 3	9 11 3	8 13 9	12 11 3	16 14 0	23 0 0	29 14 6
	34 1 3	46 3 9	58 3 6	53 2 3	76 4 0	101 3 3	137 15 0	179 7 6
2½ per cent. Clearing Charges.	0 13 9	1 2 6	1 7 3	1 5 3	1 14 6	2 8 6	3 7 0	4 8 8
Landed Cost of Wires per 1,000 Yards	34 15 0	47 6 3	59 10 9	54 7 6	78 2 6	103 11 9	141 6 0	184 0 0
per 100 Yards	3 8 0	4 12 0	5 15 6	5 7 3	7 13 0	10 6 0	14 2 0	18 4 0
Prices obtained by the Indian Cable Co., from I. S. D.	4 14 0	7 3 0	9 10 0	8 7 0	12 13 0	16 15 0	20 13 0	26 4 0

## STATEMENT No. 3 (b).

## LEAD COVERED SINGLE TO B. E. S. A. SPECIFICATION.

	1/044.	3/029.	3/036.	7/029.	7/036.	7/044.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	6 3 0	7 4 3	8 8 3	9 15 3	12 9 6	15 15 0
<i>Less</i> —5 per cent.	0 6 0	0 7 3	0 8 5	0 9 9	0 12 6	0 15 9
	5 17 0	6 17 0	7 19 10	9 5 6	11 17 0	14 19 3
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Exchange at 1s. 5½ <i>d.</i>	79 1 6	92 10 0	108 1 0	125 6 6	160 3 6	202 5 0
20 per cent. Duty	15 13 0	18 8 6	21 10 0	25 1 3	32 0 9	40 7 3
	94 14 6	111 2 6	129 11 0	150 7 9	192 4 3	242 12 3
2½ per cent. Clearing Charges	2 6 0	2 12 6	3 4 0	3 12 3	4 12 9	6 1 0
Landed Cost of Wires per 1,000 Yards	97 4 6	113 15 0	132 15 0	154 4 0	197 1 0	248 13 3
Per 100 Yards	9 12 0	11 6 0	13 4 9	15 6 9	19 13 0	24 14 3
Prices obtained by the Indian Cable Co., from I. S. D.	13 9 0	16 7 0	19 6 0	23 10 0	31 10 0	39 4 0

STATEMENT No. 3 (c).

LEAD COVERED TWIN TO B. E. S. A. SPECIFICATION.

	1/044.	3/029.	3/036.	7/029.	7/036.	7/044.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	10 2 0	11 15 0	14 4 3	17 1 0	21 6 0	27 18 0
Less—5 per cent.	0 10 1	0 11 9	0 14 3	0 17 0	1 1 3	1 7 10
	9 11 11	11 3 3	13 10 0	16 4 0	20 4 9	26 10 2
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Exchange at 1s. 5½d.	129 11 9	150 15 0	182 8 6	219 0 9	273 10 0	358 6 9
20 per cent, Duty	25 15 2	30 3 0	36 8 1	43 13 0	54 11 6	71 11 0
	155 10 11	181 2 0	219 0 7	262 13 9	328 5 6	430 1 9
2½ per cent. Clearing Charges	3 14 4	4 8 9	5 8 0	6 9 3	8 3 4	10 12 0
Landed Cost of Wires per 1,000 Yards	159 9 3	185 10 9	224 8 7	269 7 0	336 8 10	440 13 9
Per 100 Yards	15 15 3	18 9 0	22 7 3	26 15 3	33 10 6	44 1 6
Prices obtained by the Indian Cable Co., from I. S. D.	18 8 0	24 11 0	29 11 0	44 8 0	53 10 0	67 13 0

STATEMENT No. 3 (d).

C. T. S. SINGLE TO B. E. S. A. SPECIFICATION.

	1/044.	3/029.	3/036.	7/029.	7/036.	7/044.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
C. I. F. Prices for "DEKA" Wires per 1,000 Yards.	3 7 0	4 2 0	5 1 0	6 4 3	7 17 0	10 14 6
<i>Less</i> —5 per cent.	0 3 4	0 4 1	0 5 0	0 6 3	0 7 9	0 10 9
	3 3 8	3 17 11	4 16 0	5 18 0	7 9 3	10 3 9
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Exchange at 1s. 5½d.	43 0 6	52 10 9	64 14 6	79 12 6	100 14 6	137 11 9
20 per cent. Duty	8 9 8	10 8 6	12 15 9	15 15 3	20 2 9	27 8 9
	51 10 2	63 3 3	77 14 3	95 11 9	121 1 3	165 4 6
2½ per cent. Clearing Charges	1 4 7	1 9 3	1 15 0	2 6 3	3 0 6	4 2 3
Landed Cost of Wires per 1,000 Yards	52 14 9	64 12 6	79 13 3	98 2 0	124 1 9	169 6 9
Per 100 Yards	5 4 9	6 7 9	7 15 9	9 13 0	12 6 9	16 15 0
Prices obtained by the Indian Cable Co., from I. S. D.	12 11 0	14 13 0	16 15 0	22 7 0	26 14 0	33 1 0

## STATEMENT No. 4.

"DEKA" CABLES RECENTLY IMPORTED BY US.

*Rubber Insulated Cable as per Berlin Invoice, dated 26th May 1931.*

Class . . . . .	V. I. R., A. H. to B. E. S. A. Specifi- cation.
Size . . . . .	7/-064.
	£ s. d.
C. I. F. Prices for 1,000 Yards . . . . .	15 18 3
	Rs. A. P.
Exchange at 1s. 5½d. . . . .	215 2 4
Duty 5 per cent. . . . .	10 12 1
Landing and Clearing Charges at 2½ per cent. . . . .	5 6 11
Landed Cost of Wires per 1,000 Yards . . . . .	231 4 6
Per 100 Yards . . . . .	23 2 0

The Cable received above was ordered before the reduction of 5 per cent. came into force.

## STATEMENT No. 5.

	1928-29:	1929-30.	1930-31.
	Rs.	Rs.	Rs.
<i>Electric Wires and Cables Rubber insulated.</i>			
United Kingdom . . . . .	35,58,253	34,70,598	27,69,839
Germany . . . . .	2,11,965	3,30,748	3,91,949
Netherlands . . . . .	1,07,695	99,629	1,24,408
United States . . . . .	52,114	86,350	54,968
Other Countries . . . . .	65,842	2,42,697	3,50,263
Total . . . . .	39,95,869	42,30,022	36,90,827
<i>Electric Wires Cables insulations other than Rubber.</i>			
United Kingdom . . . . .	26,07,398	40,39,944	38,53,459
Other Countries . . . . .	4,29,515	2,81,572	5,26,561
Total . . . . .	30,36,913	43,21,516	43,80,020
<i>Telegraph and Telephone Wires and Cables.</i>			
United Kingdom . . . . .	1,66,054	71,314	2,63,454
Other Countries . . . . .	9,677	13,775	24,486
Total . . . . .	1,75,731	85,089	2,87,940

## STATEMENT No. 5—contd.

*Bare Copper Wires Electric other than Telegraph and Telephone Wires.*

	1928-29.	1929-30.	1930-31.
	Rs.	Rs.	Rs.
United Kingdom . . . . .	23,80,932	21,57,498	15,14,496
Germany . . . . .	1,16,682	1,38,671	2,50,651
Netherlands . . . . .	94,739	2,22,760	1,27,568
Japan . . . . .	48,008	2,90,842	1,69,533
United States . . . . .	76,149	48,107	63,692
Other Countries . . . . .	8,954	35,203	59,232
<b>Total</b> . . . . .	<b>27,25,464</b>	<b>28,93,081</b>	<b>21,85,172</b>

*Total of all classes of Wires.*

United Kingdom . . . . .	87,12,637	97,39,354	84,01,248
Germany . . . . .	4,36,512	5,76,567	10,28,407
Netherlands . . . . .	2,49,804	3,50,819	3,01,118
Japan . . . . .	60,814	3,11,305	2,03,172
United States . . . . .	3,45,720	2,39,717	1,81,975
Other Countries . . . . .	1,28,490	3,11,946	4,28,039
<b>Total</b> . . . . .	<b>99,33,977</b>	<b>1,15,29,708</b>	<b>1,05,43,959</b>

Department of Commercial Intelligence and Statistics, India. Sea-borne Trade and Navigation of British India for March 1931.

## STATEMENT No. 6.

	1925.		1926.		1927.		Total.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
Depreciation on Plant and Machinery.	13,460	0 6	13,460	0 6	13,460	0 6	40,380	1 6
Depreciation on Blocks Building.	35,773	13 5	35,773	13 5	35,773	13 5	1,07,321	8 3
Nett Profit transferred to Balance Sheet.	1,890	11 0	22,599	14 2	48,949	10 1	..	
	1928.		1929.		1930.		Total.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
Depreciation on Machinery Non-Electrical.	67,379	0 0	1,23,110	0 0	2,28,280	0 0	4,18,769	0 0
Depreciation on Machinery Electrical.	10,184	0 0	19,217	0 0	37,397	0 0	66,798	0 0
Depreciation on Block Factory Building.	67,819	10 11	1,03,942	10 11	1,76,065	10 11	3,47,828	0 9
Depreciation on Block Residential Quarters.	6,400	2 6	8,723	2 6	13,390	2 6	28,513	7 6
	Loss.		Profit.		Profit.			
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.		
Nett Profit or Loss transferred to Balance Sheet.	64,822	14 0	1,50,921	13 8	3,237	6 10		

**STATEMENT No. 7.**  
*Latest prices of Henley, Callander and other C. M. A. Wires and Cables.*  
 In force from 13th July 1931.

Size.	V. I. R. 600 Meg.	Wires 2,500 Meg.	Lead Covered Cables.			Cable Wires.		
			Single.	Twin.	3 Core.	Single.	Twin Flat.	Twin R. .
			Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs. A.
1/20 . . .	6 4	6 9	15 11	21 0	38 15	14 7	23 15	25 14
1/18 . . .	5 6	6 2	16 12	21 10	38 15	15 12	26 4	20 4
3/22 . . .	7 14	9 0	20 6	28 18	52 7	18 7	32 13	88 1
1/16 . . .	9 5	9 9	21 5	30 2	54 0	19 2	34 12	30 6
3/20 . . .	10 11	10 14	24 0	34 12	61 7	21 0	38 11	45 14
7/22 . . .	14 1	14 10	26 11	49 2	78 0	25 5	49 8	59 10
7/20 . . .	18 9	19 2	35 12	59 5	93 9	30 7	58 14	71 13
7/18 . . .	22 12	23 9	44 6	74 14	..	37 7	71 11	91 14
7/16 . . .	38 6	39 15	74 15	126 0	..	62 7	126 13	164 8
19/18 . . .	54 11	56 12	80 5	143 6	..	73 8	149 0	192 0
19/16 . . .	100 10	103 4	143 13	253 10	..	127 8	260 9	332 10
19/-072 . . .	123 1	126 8	171 2	..	..	151 8	..	..
19/-083 . . .	155 4	159 1	212 10	..	..	197 4	..	..
37/-084 . . .	190 7	194 6	226 11	..	..	223 14	..	..
37/-072 . . .	231 7	236 4	2,278 12	..	..	266 0	..	..
37/-083 . . .	293 15	299 8	349 5	..	..	340 14	..	..
37/-093 . . .	356 7	363 10	428 11	..	..	410 5	..	..
37/-103 . . .	428 11	438 1	505 6	..	..	482 1	..	..
61/-093 . . .	569 14	584 1	673 0	..	..	644 5	..	..
91/-093 . . .	823 3	843 9	970 3	..	..	908 11	..	..

(2) *Letter No. Nil, dated the 25th September, 1931, from Messrs. J. U. Karaka & Co., Bombay.*

Mr. Sandwell, one of our representatives in course of his evidence before the Tariff Board on 30th August, 1931, while on the subject of inferior Cables said:—

“Speaking for Bombay, there have been two fatal accidents during the calendar year, one was in the Bombay Port Trust and the other was the Electric Supply—both credited with using C. M. A. Cables.”

In this connection we have received a letter from the Bombay Electric Supply and Tramway Company, Limited, in which they write us as follows:—

“With reference to the evidence you gave before the Indian Tariff Board on Sunday, 30th August, 1931, we have to inform you that during this last Monsoon we had three fatalities on account of Electric shock: two were on installations, the wiring of which was at least 10 years old, and it is not definitely known with what make of cable the installation was wired up.

The third fatality occurred on an installation that was wired about three years ago with “Deka” Cable: this wire was eaten by rats. We, however, do not consider that “Deka” Cable is more appetising than any other make.”

As the Tramway Company is the party directly concerned with the said fatalities their version may be taken as more accurate.



**MESSRS. J. C. KARAKA AND COMPANY, BOMBAY.**

B.—ORAL.

**Evidence of Messrs. J. C. KARAKA and L. H. B. SANDWELL, recorded at Bombay, on Sunday, the 30th August, 1931.**

*President.*—Mr. Karaka, you represent Messrs. J. C. Karaka and Company?

*Mr. Karaka.*—Yes.

*President.*—You are principally interested in imported cables?

*Mr. Karaka.*—Yes.

*President.*—Do you represent any cables or wires imported from other countries than Germany?

*Mr. Karaka.*—No.

*President.*—As regards German cables you are interested only in the cables manufactured by Messrs. Deutsche Kabelwerke?

*Mr. Karaka.*—Yes.

*President.*—You don't represent any other?

*Mr. Karaka.*—No.

*President.*—As regards the classes of cables and wires manufactured by Messrs. Deutsche Kabelwerke, do you represent any class of cables other than the Deka class?

*Mr. Karaka.*—Deka is only a trade mark. There are three classes.

*President.*—There are three classes of Deka cable?

*Mr. Karaka.*—Yes.

*President.*—The Deka cables that you have been selling to the Indian Stores Department are all cables manufactured to British standard specification, is that correct?

*Mr. Karaka.*—Yes.

*President.*—Are all the three classes in which you deal manufactured generally to British standard specification?

*Mr. Karaka.*—No.

*President.*—Can I take it that one of these three classes is manufactured to British standard specification and that the other classes are not?

*Mr. Karaka.*—That is correct.

*President.*—Taking the two classes of cables which are not made to British standard specification, are they made to any kind of standard—I mean any recognised standard?

*Mr. Karaka.*—There was one cheap quality which we had given up importing. We have asked them to send no more.

*President.*—May I take it that you are now interested only in two classes?

*Mr. Karaka.*—Yes.

*President.*—One of them is made to British standard specification?

*Mr. Karaka.*—Yes.

*President.*—And the other?

*Mr. Karaka.*—There is a specification. If you want I can show it. It does not contain pure rubber.

*President.*—These specifications are not accepted by the Indian Stores Department?

*Mr. Karaka.*—We have never offered them.

*President.*—Are they accepted by the Port Trust?

*Mr. Karaka.*—We never sell to any of the Government Departments this class of cable. We are only offering this to the bazar and not to the Port Trust and public bodies.

*President.*—May I know what proportion of your total sales is represented by your sales to the Stores Department and these other public bodies? Taking, for example, your sales of last year, approximately what proportion of your sales represented sales to these public bodies?

*Mr. Sandwell.*—The biggest sale is to the Indian Stores Department, which is for a lakh of rupees. We have been securing from the Indian Stores Department orders for the last four years for the supply of cables to B. S. Spec. We have now taken up the agency for the whole of India since January last. We were agents for Bombay only before, and Russa's used to represent them in Calcutta.

*President.*—Russa's used to represent Messrs. Deutsche Kablewerke?

*Mr. Sandwell.*—Yes, particularly for the Indian Stores Department, although in Bombay we were carrying stocks against Russa's orders and delivering to the Indian Stores Department but this year we have received orders direct from the Indian Stores Department as Russa's have gone down.

*President.*—You are the sole representatives, are you, in India of Messrs. Deutsche Kabelwerke?

*Mr. Karaka.*—Yes.

*President.*—It was on that basis that you sold to the Indian Stores Department last year?

*Mr. Karaka.*—Do you mean 1931-32?

*President.*—Taking the year from April 1st, 1930, to March 31st, 1931?

*Mr. Karaka.*—Yes.

*President.*—On the basis that you are the sole representatives of Messrs. Deutsche Kabelwerke?

*Mr. Karaka.*—Yes.

*President.*—On that basis, what proportion of your sales represented the sales to the Indian Stores Department and public bodies?

*Mr. Sandwell.*—As you are aware, there are no quantities mentioned in the Indian Stores Department's contracts. The contract is made for price. The contract is a rate contract only.

*President.*—The point that I am trying to raise is this. With regard to a commodity like cables it is very difficult to estimate on the basis of quantities—either tonnage, yardage, or anything of that sort. Supposing you took the total value of your sales in 1930-31, approximately what proportion of that value was represented by your sales to public bodies?

*Mr. Sandwell.*—As a matter of fact during the last four years, the sum total of our sales to the Indian Stores Department amounts to Rs. 8,500.

*President.*—That is to say, if you took the average of the last four years?

*Mr. Sandwell.*—I mean the aggregate during the last four years.

*President.*—Supposing you took your sales in 1930-31—not merely the sales to the Stores Department but also your sales to the Madras Corporation, the Bombay Electric Supply Corporation, the Calcutta Port Trust and the Bombay Port Trust?

*Mr. Sandwell.*—The proportion is about 8 to 1—8 to the general public and 1 to the public bodies.

*President.*—That is to say, 1/9th of your total sales is to these public bodies and the other is bazar sales?

*Mr. Karaka.*—Apart from that we have been selling very heavily to the Great Indian Peninsula Railway, and other Departments almost every week to the value of Rs. 1,000.

*President.*—Supposing you included that in public bodies and took the Indian Stores Department, the Railways, Corporations and the Port Trusts—everything outside the bazar—would that alter the proportion?

*Mr. Sandwell.*—It would be 1 to 9.

*President.*—That I don't follow. If it was 1 to 8 without the G. I. P., how could it be 1 to 9 with the G. I. P.?

*Mr. Sandwell.*—It would be 1 to 7.

*President.*—That is 1/8th?

*Mr. Sandwell.*—Yes.

*President.*—Does that include both cables and wires? Are you interested in bare conductors?

*Mr. Karaka.*—Very little.

*President.*—We can leave that out?

*Mr. Karaka.*—Yes.

*President.*—If you take the cables which you have been selling to public bodies during the last three or four years, have you had any complaints? That is to say, you are selling them as British standard specification cables?

*Mr. Karaka.*—Yes.

*President.*—If you take the cables that you sold four years ago, have they so far stood the test of time?

*Mr. Karaka.*—We have never had any complaint so far.

*President.*—So that taking your experience of these four years your B. E. S. A. Deka cables have not merely satisfied laboratory tests but also have satisfied the test of experience?

*Mr. Karaka.*—Yes.

*President.*—Practically the whole of your sales in the bazar represent, may I take it, non-standard cables in the sense they are cables not manufactured to British standard specification?

*Mr. Sandwell.*—We have been selling almost half and half: 6,100 bazar class and 6,700 B. E. S. A.

*President.*—That is to say, a large proportion of your sales outside these public bodies also represents British standard cables?

*Mr. Sandwell.*—Yes.

*President.*—You are more or less familiar, I take it, with the problem which we are considering here. The Indian Cable Company of Tatanagar have applied for protection and we have been examining their costs and the prices they have been realising. One of the difficulties with which we are confronted is this. Assuming for argument's sake that they satisfy the conditions laid down by the Indian Fiscal Commission, we have to consider the question what precisely is the best method of protection which we can adopt in this case. Their own suggestion is one which is composed so to speak of two alternatives. They say "Give us either a specific duty on cables or introduce a system of control with regard to the import of cables which would have the effect of shutting out cables which do not come up to particular recognised standards". They don't necessarily say British standards. Their suggestion is that the Government of India in consultation with their technical advisers should lay down certain standards which must be fulfilled by cables imported into this country. If that is done, they contend that the very severe competition with which they are faced as the result of exceedingly cheap cables being imported into this country would to some extent disappear. In that way they would be safeguarded. Now I am not going into the merits of that question, but I should like to have some information with regard to the main points which are involved in that suggestion. One of these points is this. As the result of your experience in non-standard cables, would you accept the proposition that there is a great deal of potential danger to the country involved in the use of non-standard cables say for house wiring purposes?

*Mr. Sandwell.*—Assuming that we have a standard laid down for India, that is to say, the cable must comply with a certain specification with regard to insulation and other things, that is to say, the dimensions of the cable; if we have a standard for India, there is no objection to the standard being laid down for all, then the result is going to be that people will go in for the cheaper cable, whether it is good or not. Here I have a chart (tendered) of the prices of rubber and copper showing how they have fallen. This is from the records of the Chamber of Commerce. You will see from this that the C. M. A. cable prices fell only by 2 annas although copper went down by 60 per cent. and they rose up again when the duty came round, whereas the German cables have been dropping with the drop in the price of copper. If a duty is put on now, it means that the consumer will have to pay more for this cable which is B. E. S. A. or he will have to buy at this price (indicated on chart) a cable which has no standard at all.

*President.*—My point is this. How many years does that chart represent?

*Mr. Sandwell.*—This is from 1929.

*President.*—Just for the past two years?

*Mr. Sandwell.*—Yes.

*President.*—Taking the last two years the drop in the prices of Continental cables really represents nothing more than the drop in the price of copper?

*Mr. Sandwell.*—And rubber (handed the chart).

*President.*—And the other point is that in spite of the considerable drop in the price of copper, the C. M. A. price remained stationary more or less?

*Mr. Sandwell.*—Yes.

*President.*—What precisely is the suggestion that you base on that?

*Mr. Sandwell.*—The duty will hardly help the country at all; that is to say, the consumer will have to pay more for a worse class of cable or pay this price for a worse class of cable and more for a better class cable. During the present depression people will certainly go in for a cheaper class of cable.

*President.*—Let me take it then that you have no objection to standards as such being laid down for cables in use in India?

*Mr. Sandwell.*—We have no objection.

*President.*—Provided they are standards which are prescribed with reference to the conditions which obtain in this country?

*Mr. Sandwell.*—Exactly, and if there is to be a standard for imported cables there should be a standard also for cables made in India. I understand that the Indian Cable Company are also selling bazar qualities.

*President.*—That necessarily follows. Supposing it was suggested that the standards that are prescribed for the Indian cables, that is to say, for cables used in India, whether imported or made in the country, should approximate to the standards laid down by the B. E. S. A.?

*Mr. Sandwell.*—I don't mind if they are actually copied, but this is very objectionable. Take the case of the Bombay Fire Insurance Rules. You will find that it is stated there that if they were to accept any risk the cable must be Association cables made by British Association manufacturers. We have no objection to any standard, but we have objection to this sort of thing.

*President.*—They don't undertake any insurance except in respect of C. M. A.?

*Mr. Sandwell.*—That is so.

*President.*—This is not merely B. E. S. A. but C. M. A.?

*Mr. Sandwell.*—It must be an Association cable; otherwise it must be specially approved by them.

*President.*—Would this section cover cables which are not merely not C. M. A. but which are guaranteed to C. M. A. standard?

*Mr. Sandwell.*—If it is a cable made to C. M. A. standard in some other country, it must be specially approved by them. C. M. A. is a private body and how can we comply with C. M. A.? We might as well have merchant shipping controlled by the Royal Bombay Yacht Club Rules.

*President.*—It must be C. M. A. or cables which are guaranteed to be C. M. A. quality?

*Mr. Sandwell.*—It must be specially approved by that Association. They say so.

*Mr. Boag.*—That means they are prepared to take the guarantee?

*Mr. Sandwell.*—I do not know what they mean when they say that it must be specially approved by the Association. C. M. A. are a private body and they do not publish their secrets of manufacture.

*President.*—Supposing the provision which Government might make in this regard simply said that the cables must satisfy the standard laid down by the B. E. S. A., so far as you are concerned, you would not mind?

*Mr. Sandwell.*—No objection.

*President.*—Supposing we take it a step further. If the Government of India said neither C. M. A. nor B. E. S. A. but only laid down standards?

*Mr. Sandwell.*—That would be still better.

*President.*—That from your point of view would be the best solution?

*Mr. Sandwell.*—Be national, if you want to be national.

*President.*—What you have said so far is this that you have no objection to control as such provided the standards are standards which are really suitable for the conditions in this country.

*Mr. Sandwell.*—Yes.

*President.*—Are you quite sure that there is a case for control in the country at all?

*Mr. Sandwell.*—I am sure there is not.

*President.*—On public grounds?

*Mr. Sandwell.*—To begin with it is a most unnatural position the company is in. The Government of India lay down that they must have natural resources.

*President.*—Don't go into the question of protection. There are two points of view from which we are looking at the question of control. You can have a system of control in order to provide protection for the Indian Cable Company. Leaving that aside for the time being, there is also a case for control because inferior cables are being imported into this country which involve risks to public safety. Take the second point of view—menace to the public?

*Mr. Sandwell.*—Speaking for Bombay, there have been two fatal accidents during the calendar year, one was in the Bombay Port Trust and the other was the Electric Supply—both credited with using C. M. A. cables!

*President.*—Are there British cables in use in Bombay which are non-C. M. A.?

*Mr. Sandwell.*—The C. M. A. makers issue a kind of cable which they call non-Association. You have seen Association cables of W. T. Henley's; there is another called non-Association, that is, they do not come up to that specification.

*President.*—That is probably cable made by people who are not members of the C. M. A.?

*Mr. Sandwell.*—It may be that. I think we ought to have a national standard for India and everybody should comply with that standard.

*President.*—How long have your company been connected with the cable business?

*Mr. Karaka.*—Eight years.

*President.*—Speaking from your experience during these eight years do you think there has been serious risk to public safety on account of inferior cables?

*Mr. Karaka.*—As far as I can remember during these 8 years there have been no fatality at all as a result of the use of inferior cables.

*President.*—In spite of that you would not mind a system of control?

*Mr. Karaka.*—No.

*President.*—The precise way in which it is suggested not merely by the Indian Cable Company but also by various Electric Supply Corporations represented by the British India Electric Committee is this, that this control should be exercised by means of a system of testing at the ports of entry. Supposing that was the form in which the control was to be adopted, would you mind?

*Mr. Karaka.*—We would not mind, but a system of testing won't tell you anything about durability.

*President.*—As far as we know there is no means of testing the durability of a cable except by waiting for experience.

*Mr. Sandwell.*—Exactly.

*President.*—Therefore if you are going to lay down standards at all the only way in which the testing can be done is by testing the cables in a laboratory; there is no other way of doing it. Suppose the testing was confined to laboratory testing, would you object to such a system at the ports of entry with a view to ruling out altogether cables which do not satisfy the test?

*Mr. Sandwell.*—Not at all provided also that the same test is carried out at Jamshedpur.

*President.*—That is agreed. Supposing you had two alternatives before you, one was to test at the ports of entry and the other was to give powers of control to local bodies, corporations and so on, that is to say, you allow these inferior cables to come into the country but you try and exercise such control as you have under the electricity rules and see that only satisfactory cables are actually used?

*Mr. Sandwell.*—I think Rule 23 of the Electricity Rules complies with that: a supply company cannot connect an installation unless leakage to earth is less than 1/5000th part of the maximum supply demanded on the consumer's premises.

*President.*—It has been represented to us that the real purposes of Rule 23 is to prevent leakage.

*Mr. Sandwell.*—Yes, and the actual danger to life is leakage.

*President.*—That is to say, the primary concern of the Electric Supply Corporation when it acts under Rule 23 is to see that one consumer does not use his electricity in such a way that his neighbour does not have a fair share of it.

*Mr. Sandwell.*—The whole of Chapter IV of the Indian Electricity Rules from 23 to 33 is for public safety.

*President.*—Does an electric supply corporation really exercise its powers under Rule 23 with a view to preventing the use of inferior cables?

*Mr. Sandwell.*—The whole idea of the rule is safety of the consumer and also to prevent interference with the telegraphs. If we have these heavy electric supply currents leaking into the earth they would interfere with the telegraphs.

*President.*—Do you think the particular limit laid down under Rule 23 is a satisfactory limit?

*Mr. Sandwell.*—I think so. 1/5000th part of the consumers current is enough because many are using only one ampere.

*President.*—You think that if Electric Supply Corporations exercise their powers under Rule 23 that would be sufficient guarantee?

*Mr. Sandwell.*—It has been a sufficient guarantee. I can't say that electricity has been killing everybody or endangering human life.

*President.*—Let me put it in another way. You are aware, are you not, that cables which you would consider inferior in the sense of unsuitable cables are actually being used at any rate in small quantities?

*Mr. Sandwell.*—There are some frightfully bad cables being used.

*President.*—And in regard to these cables there is no case of Electric Supply Corporations exercising their powers; if it is true that inferior cables are actually being used and if it is also a fact that under Rule 23 no steps have been taken to prevent the use of these cables—at present actually according to your statement cables which are distinctly inferior are being used, and according to your statement also under Rule 23, Electric Supply Corporations and so on have not exercised their powers in order to prevent the use of such cables.

*Mr. Sandwell.*—They have exercised their powers by carrying out a test before connecting: the test is not for the quality of the cable but for the installation.

*President.*—The test has been such that the use of these cables has been permitted?

*Mr. Sandwell.*—Yes.

*President.*—Taking simply these two facts would you say that Rule 23 has been inoperative from your point of view?

*Mr. Sandwell.*—From the cable quality point of view it is inoperative.

*President.*—What is the other rule you are thinking of?

*Mr. Sandwell.*—Rule 24, where the supply company can make a test if they like and see if there is leakage.

*President.*—That is further scope for action by an Electric Supply Corporation?

*Mr. Sandwell.*—Yes.

*President.*—May I try to sum up the point. What you have said with regard to Rules 23 and 24 amounts to this: you think that these rules between them make sufficient provision for control of the kind that we are talking about?

*Mr. Sandwell.*—They don't make sufficient provision for control of cable manufacture but I think there is sufficient provision for the safety of the public. They have answered their purpose since 1922.

*President.*—If it were simply a question of public safety your opinion is that Rules 23 and 24 would serve that purpose?

*Mr. Sandwell.*—I think so.

*President.*—What about Rule 40-A? It gives Local Governments certain powers regarding the licensing of contractors?

*Mr. Sandwell.*—That rule has nothing to do with cables. It came out only in October last year.

*President.*—Supposing a contractor is in the habit of using inferior cables in the sense of really dangerous materials will not Rule 40-A give Local Government sufficient power to withdraw his licence?

*Mr. Sandwell.*—Yes, but the unfortunate thing about it is that there are so many contractors who are very well off who are working without licence. A man without a licence cannot fill in a test form and send it to the supply company but there is nothing to stop him from putting in additional points. The rule is abused on every side and this man who has not got a licence is really better off than a man having a licence.

*President.*—Why does anybody care to take a licence then?

*Mr. Sandwell.*—There are other restrictions.

*President.*—We understand that the only Local Government which has so far cared to act on Rule 40-A is the Bombay Government.

*Mr. Sandwell.*—Yes. The Bengal Government tried it but I think they dropped it.

*President.*—The particular point that was brought to our notice was that the Bengal Government thought that the organization required for bringing Rule 40-A into operation would be too expensive and although the Bombay Government have adopted the rule it has not been enforced in practice.

*Mr. Sandwell.*—No, it is not. As a matter of fact, at the present day there are about 360 contractors who have got licences; formerly there were 600 or so, so that the rest are probably going on without licence and the trouble is that a lot of these licensed contractors who have not got any business are working like doctors signing test reports.

*President.*—Let me put it this way: Suppose a Local Government like the Bombay Government accept this rule and then they try to enforce it to really make it effective, do you think that it would have the effect of stopping the use of materials which are dangerous to public safety?

*Mr. Sandwell.*—I don't think you can legislate against it. I have seen a man using telephone cables in his installation and have passed the installation as an electric supply officer because there was no rule by which I could stop him from having his current, although he was using telephone cables. The only power in my hand was Rule 23, but it answered the test and I had no say in the matter. If you put all these restrictions I may go along to a dealer and say I want a bundle of telephone wire, then who is to see where I use it?

*President.*—In that particular case were you acting as a representative of the Electric Supply Company?

*Mr. Sandwell.*—Yes, I was Meter Superintendent of the Bombay Electric Supply Corporation.

*President.*—That is obviously an undesirable thing to do.

*Mr. Sandwell.*—Yes.

*President.*—You are asking now for a system of control?

*Mr. Sandwell.*—I am against it because it is too difficult to tackle.

*President.*—If you admit that all these powers that are given under Rules 23, 24 and 40-A are good.....

*Mr. Sandwell.*—They are good enough for the safety of the public but I admit that they are not good enough for the control of cable manufacture. Possibly the telephone cable I saw in use eight years ago may be still working.

*President.*—I am trying to understand the position as you have stated it. The way I understand it is that Rules 23 and 24 and 40-A, while they vest a certain amount of power in the hands of Local Governments and Electric Supply Corporations, these powers are not enough for preventing the use of inferior cables which might be dangerous?

*Mr. Sandwell.*—Yes.

*President.*—But as far as your actual experience goes there has been no actual case of danger to public safety as a result of using these inferior cables?

*Mr. Sandwell.*—I think if you reckon up all these things you will probably find that the honour is divided between C. M. A. and other cables as regards accident. The one accident that I mentioned on the Port Trust, was a C. M. A. cable exposed to the wind.

*President.*—It is only then for the purpose of preventing the use of inferior cables that you would suggest a system of testing at ports of entry and not from the point of view of public safety?

*Mr. Sandwell.*—I say if Government wants to keep out inferior cables, then let all submit to an insulation test.

*President.*—You say if Government wants to do it: but Government has no information on the subject at present and it is our business to make some recommendation to Government. What I want to ask you is, supposing it



was simply a question of public safety and not a question of protection to the Indian Cable Company, would you suggest a system of testing at the ports of entry?

*Mr. Sandwell.*—I would not suggest that. I don't think it is necessary.

*President.*—So that if the question were considered simply on the basis of public safety then you have no proposals to make?

*Mr. Sandwell.*—No.

*President.*—Now let us go on to the question of protection. We, as a Board, have not considered the question as to what our proposals are going to be in this matter. Only the facts are placed before us. Assuming for argument's sake that we come to the conclusion that the Indian Cable Company deserves protection. Assume also that we find that a system of specific duties may on the one hand have the effect of raising the cost of electrical wiring to consumers and on the other hand it won't have the effect of protecting them because even with a protective duty various classes of cables may be cheaper than the cables they put on the market. Therefore on both these grounds let us suppose specific duties are found to be inoperative for purposes of protection and the only means of protecting the Indian Cable Company is a system of control devised for the purpose of shutting out inferior cables. In that case would you object to a system of testing at the ports of entry?

*Mr. Sandwell.*—It would mean, just to protect the Indian Cable Company, that you would be making the poor consumers pay a very much higher price for their cables.

*President.*—We are not suggesting any specific duty at all.

*Mr. Sandwell.*—You just now spoke about the specific duty.

*President.*—We are ruling that out. Supposing we give the whole of the protection that they require by means of test at the port of entry?

*Mr. Sandwell.*—And at their works.

*President.*—If that was the proposition, you would not mind it?

*Mr. Sandwell.*—No. As importers it would not hurt us at all. You put the duty on and we add the duty to the price. This is British specification cable that we mention here. Protection to that would not hurt us at all.

*President.*—Specific duty is still at the back of your mind.

*Mr. Sandwell.*—The testing of that which complies with the British Standard Specification would not hurt us at all.

*President.*—Let me put the position so that we might be sure that we understand each other. The Indian Cable Company might be able to get better prices for their cables, if there were not exceedingly cheap cables in the market which tend to depress the prices as a whole. Therefore in order to prevent that element of undue competition it is suggested that by a system of control, cables which are distinctly inferior might be shut out altogether. To that extent you might exercise a stimulating influence on prices. If that was the proposal, I take it you would not mind.

*Mr. Sandwell.*—If you are going to test imported cables that comply with a certain specification, we won't mind it, provided the same test is applied to the cables made in India. As I said before they are selling a cheaper quality cables too.

*President.*—Supposing this question of prescribing standards suitable for Indian conditions was seriously taken up, have you any suggestion to make as regards the sort of authority through whom the Government of India might lay down standards?

*Mr. Sandwell.*—I should think the Department of Industries of all the Local Governments might do it as they have other tests and things to make.

*President.*—As you know, the Indian Electricity Act is an Act of the Government of India and the rules also are made by the Government of India.

*Mr. Sandwell.*—The Administration is in the Local Government's hands.

*President.*—Supposing we are going to make a recommendation to the Government of India that suitable standards should be laid down for cables in India, what do you think should be our recommendation to the Government of India regarding the particular body through whom the Government of India might lay down these standards? Would the Stores Department do it?

*Mr. Sandwell.*—I think the Department of Industries would do it.

*President.*—You want all the Directors of Industries to meet in conference?

*Mr. Sandwell.*—Yes.

*President.*—And the Electrical Adviser to the Government of India?

*Mr. Sandwell.*—There is no Electrical Adviser now.

*President.*—Colonel Pitkeathly of the Indian Stores Department is an electrician.

*Mr. Sandwell.*—Yes, they have their jobs cut out for getting stores, giving orders, conducting actual test and things like that. In the case of the Government of the Punjab, it is the Department of Industries. Here in Bombay it is the Public Works Department.

*President.*—Would you, as people interested in the importation of cables, like to be represented in a Conference or a Committee called together for the purpose of prescribing standards? Do you think it is important that you should be represented.

*Mr. Sandwell.*—Certainly we should like to be represented, because it may not always be the case that the British standard is the best. There are other countries which are 20 years ahead of Great Britain.

*President.*—If you left it entirely to the Directors of Industries, do you think that your interests will be sufficiently safeguarded?

*Mr. Sandwell.*—You suggested a Committee just now.

*President.*—A Committee representing whom?

*Mr. Sandwell.*—Various parties, importers and manufacturers meet together and prescribe definite standards to suit the tropical climate.

*President.*—Supposing we suggest the appointment of a Committee by the Government of India consisting of representatives of manufacturers, of importers and traders and of the general public, that you think would be a suitable arrangement.

*Mr. Sandwell.*—May I also say Electrical Supply Companies?

*President.*—Yes, suppliers, manufacturers, importers and representatives of the Legislature as representing the public. Would the appointment of a Committee of that kind for prescribing standards meet with your approval as importers?

*Mr. Sandwell.*—Yes, it would.

*President.*—You are definitely opposed to specific duties?

*Mr. Sandwell.*—Yes, for one reason that this figure (on the chart) shows that prices have come down in proportion to the drop in the price of raw materials. If there is a specific duty, it would mean in the case of the importers of Continental cables 38 per cent., whereas it is only 23 per cent. in the case of the man who has kept up an artificial price. It means the man who is keeping the thing within the reach of the masses has to suffer to an extent of 11 to 12 per cent.

*President.*—There are various classes of Continental cables imported into India outside those which you represent?

*Mr. Sandwell.*—There are several Austrian, Dutch and Belgian.

*President.*—And a fair amount of Japanese?

*Mr. Sandwell.*—Yes.

*President.*—Supposing a specific duty on these lines were levied?

*Mr. Sandwell.*—It would have the effect of enhancing their sales.

*President.*—It would have the effect of reducing the quality still further.

*Mr. Sandwell.*—It might reduce our quality, but it will enhance their sales. This (pointing to chart) is just within the reach of some people. If you just put a duty of 15 per cent. on it, or one rupee per coil, that would put it out of the reach of many. You would be helping the Japanese.

*President.*—The effect of a specific duty would be practically setting a premium on the inferior cables.

*Mr. Sandwell.*—Yes, it would increase their sales. You must remember the mentality of most of the Indian consumers.

*President.*—Can you explain to us? I find from the statement of prices that you have given us "Deka" cables are in no case higher than two-thirds of the price of C. M. A. and the Indian Cable Company. In some cases they are much less than two-thirds. On an average I should say with regard to the bulk of the cables it might not exceed 50 per cent. What I should like to know is how exactly do you account for this big difference. After all in things like cables, materials are a fairly large proportion.

*Mr. Sandwell.*—I think the Indian Cable Company themselves account for it. The prices are not regulated by the raw materials, but they are regulated by the English cables.

*President.*—We know their costs and we are in a better position to speak about it. What I want to know is this: taking your position and comparing it with C. M. A. what is the real difference causing this disparity in prices? Materials constitute a very important part of the cables and as far as these materials are concerned, copper, lead and rubber, the prices of these are determined on a world parity basis. People in Germany have no advantage over the people in England as far as these things are concerned, but then why is there this disparity?

*Mr. Sandwell.*—Probably cheaper labour.

*President.*—Labour can account only for a small part of it.

*Mr. Sandwell.*—Labour, interest and depreciation on the outlay of cable manufacturers account for more than copper and rubber do.

*President.*—You are quite familiar with the make up of C. M. A. cables.

*Mr. Sandwell.*—Yes.

*President.*—Is there any considerable difference between the quantity and the quality of the materials which go into the make up of a C. M. A. cable and of a Deka cable?

*Mr. Sandwell.*—The only difference that I really know of is the printing on the tape which, of course, is protected by law. I don't know of anything else. If you put the thing to any test, it will answer the test all right.

*President.*—You are talking as the result of having carefully examined the thing.

*Mr. Sandwell.*—Whatever the British standard specification says has been complied with in this specific case just to get over the fire insurance rules. The Deka cables were considered unfit on account of their not complying with the C. M. A. standard. We don't know the C. M. A. secrets of manufacture. We can send you cables made to the British standard specification if you want.

*President.*—What happened?

*Mr. Sandwell.*—C. M. A. people have got to comply with the specification and Germans are doing the same thing except the printing on the tape of C. M. A. consequently our cables are now accepted.

*President.*—Apart from the reputation which the C. M. A. have as the result of their being in the market for 50 or 60 years, is there any difference between the make up of the cable between yours and theirs?

*Mr. Sandwell.*—They can't comply with the British standard specification more than me.

*President.*—It might be that the C. M. A. might be superior than the British standard specification.

*Mr. Sandwell.*—It might be. I have seen evidence of some American copper being rendered superior through the C. M. A. rolling mills. Mr. Leake in his evidence speaks of it.

*President.*—It is really a question of fact. It is not a question of opinion. You have examined the make up of a C. M. A. cable and the make up of a British Standard Deka cable. You are sure there is no difference.

*Mr. Sandwell.*—Our principals have got certificates to that effect.

*President.*—You told me definitely that you have examined the texture of a C. M. A. cable with the texture of a British Standard Deka cable. As the result of your examination, is it a fact that you have found no difference in the quantity or quality?

*Mr. Sandwell.*—I found no difference at all.

*President.*—We find from a letter which we have received from the public authorities in this country that there is a certain working arrangement with regard to prices between the C. M. A. people in India and the Indian Cable Company. Have you any information with regard to that?

*Mr. Sandwell.*—We have no personal information on it beyond what we have read in these reports that they are managed by the British Insulated Company and their prices are regulated by the price of British cables. Personally I have no experience of the Indian Cable Company at this end of India.

*President.*—There is no understanding at all between you and the C. M. A.

*Mr. Sandwell.*—None at all.

*President.*—There has been no suggestion at all.

*Mr. Rahimtoola.*—Mr. Karaka, you are the proprietor of this firm?

*Mr. Karaka.*—Yes.

*Mr. Rahimtoola.*—You just now told us that you were importing originally 3 classes of cables.

*Mr. Karaka.*—Yes.

*Mr. Rahimtoola.*—Subsequently you stopped importing the third class?

*Mr. Karaka.*—Yes.

*Mr. Rahimtoola.*—May I know what was the reason which led you to stop that?

*Mr. Karaka.*—It was found rather too thin by the buyers.

*Mr. Rahimtoola.*—That is exactly what you call inferior cable.

*Mr. Karaka.*—People have vague impressions of quality. They go by the thickness. They think the thicker the cable, the better. That is the opinion of the general Indian illiterate consumer.

*Mr. Rahimtoola.*—Then the second class which is not equal to the British standard is saleable in the market simply because it is thick.

*Mr. Karaka.*—It is good insulation and it is also thick.

*Mr. Rahimtoola.*—I want to know exactly what was the reason why this No. 3 was stopped. Was it disapproved by the dealers or the contractors who are doing the house wiring work?

*Mr. Karaka.*—The dealers disapproved of it on account of its thinness.

*Mr. Rahimtoola.*—You said you were able to sell to Government during the last four years cables amounting to Rs. 8,500 a year.

*Mr. Sandwell.*—That is the aggregate for the last four years.

*Mr. Rahimtoola.*—Was it due to the fact that you were the sole agents for the Bombay Presidency or that figure would remain stationary even when you became the sole representative of India?

*Mr. Sandwell.*—That was an order for the Indian Stores Department, where there is no quantity order at all. We just quote a certain price. In

the last four years they have taken goods to the value of Rs. 8,500. Mr. Karaka is the sole agent.

*Mr. Rahimtoola.*—Mr. Karaka gave the Board to understand that some time before he was only a representative of the Bombay Presidency and subsequently he became the sole representative of India. I want to know whether that made any difference.

*Mr. Sandwell.*—Up to two years ago Russa Engineering Works was representing Bengal.

*Mr. Rahimtoola.*—In spite of your becoming the sole representative the average aggregate sale to Government remained the same.

*Mr. Sandwell.*—There has been no special order since.

*Mr. Rahimtoola.*—You have admitted here that there are a large number of cheap cables coming into the market which have according to your experience proved injurious.

*Mr. Sandwell.*—According to my experience they have not proved injurious.

*Mr. Rahimtoola.*—You said that there are a large number of cheap cables coming into the country. What do you mean by "cheap cables"?

*Mr. Sandwell.*—Cheap cable is one where they don't use the proper quantity of rubber, where they use guttaparcha. Some American cables contains some mixture which I do not know myself.

*Mr. Rahimtoola.*—Do I understand according to you any cable which comes to India and which does not satisfy the British standard is an inferior cable?

*Mr. Sandwell.*—There are other tests besides British standard tests.

*Mr. Rahimtoola.*—We have heard a lot about low grade cables, inferior cables and cheap cables. I want to know exactly what you mean by "cheap cables".

*Mr. Sandwell.*—What I mean by "cheap cable" is this. A man does not use a proper die. A wire is drawn out and it has not the same dimension all the way through. As a matter of fact, there is no wire which is the same all through. There is no standard specification for the cheap cable. In the cheap cable there is a variation of 8 to 10 mills for every 100 yards.

*Mr. Rahimtoola.*—Have you got any particular objection to cheap cables being used for house wiring?

*Mr. Sandwell.*—No objection at all.

*Mr. Rahimtoola.*—You have said that as far as the test for public safety is concerned, the Electric Supply Corporations have got powers to step in on account of leakage.

*Mr. Sandwell.*—Yes.

*Mr. Rahimtoola.*—And you say that Rule 24 makes that provision by which the Electric Supply Corporations even to-day can step into a house and prevent danger to life.

*Mr. Sandwell.*—It can test for leakage and if there is, it is their business to stop it.

*Mr. Rahimtoola.*—Leakage is a source of danger to life?

*Mr. Sandwell.*—Yes. It is the leakage that causes fatality in most cases.

*Mr. Rahimtoola.*—According to you, if the leakage is prevented within the powers given to the Corporation, the danger to life is *nil* whatever the wire used?

*Mr. Sandwell.*—Precisely.

*Mr. Rahimtoola.*—You have also pointed out here that the prices which the Indian Cable Company get are almost equal to the prices obtained by the C. M. A. importers?

*Mr. Sandwell.*—I find from the latest list that some of their lead covered cables are higher.

*Mr. Rahimtoola.*—There is a working arrangement between the British Insulated Cables and the C. M. A. importers?

*Mr. Sandwell.*—We have no personal knowledge of that.

*Mr. Rahimtoola.*—The British Insulated Cables are members of the C. M. A.?

*Mr. Sandwell.*—Yes.

*Mr. Rahimtoola.*—The point which concerns me is about the increased price to the consumer. You have already objected to the question of specific duty which you say will definitely lead to the large imports of what are known as inferior cables?

*Mr. Sandwell.*—Yes.

*Mr. Rahimtoola.*—You said that you would have no objection to the testing at the port of entry?

*Mr. Sandwell.*—I do not object to that.

*Mr. Rahimtoola.*—As you are aware, the question of testing is primarily recommended as a sort of protection to the Indian Cable Company. Do I understand that your opinion is that the prices which the Indian Cable Company are getting and which they say are unremunerative are due to the fact that they are sticking to the C. M. A. standard which according to you is a very high standard?

*Mr. Sandwell.*—Personally I think that that is the reason. They said in 1928 that if they could double their production their costs would be the cheapest in the world. Why didn't they double their production? You have to make some sacrifice of profit if you are doubling your production and if you are going to make your cost the cheapest in the world.

*Mr. Rahimtoola.*—My point is this. To-day there is a certain price ruling in the market where there is no test and as far as danger to life is concerned it is at present nil.

*Mr. Sandwell.*—Quite.

*Mr. Rahimtoola.*—Or if it is there, it arises equally from C. M. A. cables as from other cables? That is the position to-day as revealed in your previous replies. If you want to lay down a test after the Conference—whatever the personnel may be of that Conference—has met and decided on the question of standard, that test will indirectly raise the price to the consumer because that standard would, I think, naturally be higher than the standard of most of the cables imported into this country from Japan, Germany, etc.

*Mr. Sandwell.*—That standard would be suited to local conditions.

*Mr. Rahimtoola.*—By setting a standard do you not think that there would be an increase in the price to the consumer in view of your statement that the Indian Cable Company are handicapped because they are making cables equal to C. M. A. cables which are higher priced than the cables that come into the market and therefore they cannot compete.

*Mr. Sandwell.*—We are importing cables equal to the British standard specification.

*Mr. Rahimtoola.*—You come under the second category so far as your chart is concerned?

*Mr. Sandwell.*—Do you mean in regard to prices?

*Mr. Rahimtoola.*—Yes. I am talking of prices. At present there is no test. Would not the introduction of a test lead to higher prices to the consumer?

*Mr. Sandwell.*—Not for this cable.

*Mr. Rahimtoola.*—We are not talking of this cable. We are talking of a cable which is going to come into the market.

*Mr. Sandwell.*—If it is going to be superior to this British standard specification cable, it will cost the consumer more.

*Mr. Rahimtoola.*—At present there are cables in the market cheaper than Deka cables?

*Mr. Sandwell.*—There are.

*Mr. Rahimtoola.*—Therefore whatever standard you may lay down it will be about equal to the British standard?

*Mr. Sandwell.*—That cable won't be able to come in or if it does come in, it will be prepared to answer the standard laid down. If it is prepared to answer the standard laid down, it must be a more expensive cable.

*Mr. Rahimtoola.*—If you fix a new standard, people, who are importing at present and who want to keep the market, will have to conform to the minimum.

*Mr. Sandwell.*—Yes.

*Mr. Rahimtoola.*—Naturally they will have to alter their business in order to suit the test.

*Mr. Sandwell.*—Yes.

*Mr. Rahimtoola.*—Will that not affect the price?

*Mr. Sandwell.*—Yes.

*Mr. Rahimtoola.*—And it will go against the consumer if the price goes up?

*Mr. Sandwell.*—It will.

*Mr. Rahimtoola.*—You have suggested certain methods by which a Conference could be convened. The President has pointed out to you the sort of representatives who will be on the Committee. You cannot expect all the importers to be on that Committee. What system would you adopt to secure that? Would you adopt a conference of importers to select their representatives?

*Mr. Sandwell.*—That might be left to the Chambers of Commerce.

*Mr. Rahimtoola.*—They would elect representatives of importers?

*Mr. Sandwell.*—Yes. They are in touch with most people.

*Mr. Rahimtoola.*—Do you mean the European Chambers?

*Mr. Sandwell.*—And Indian.

*Mr. Rahimtoola.*—Both Bombay and Calcutta?

*Mr. Sandwell.*—In Bombay there are two chambers, European and Indian.

*Mr. Rahimtoola.*—In Calcutta also there are two Chambers?

*Mr. Sandwell.*—Both Chambers might be asked to elect the representatives.

*Mr. Rahimtoola.*—That would adequately protect the interests of the importers without any need for any direct representation?

*Mr. Sandwell.*—Yes.

**Tata Hydro-Electric Agencies, Ltd., Bombay.**

(1) *Letter No. 316-C-6, dated the 1st June, 1931, from the Tariff Board, to the Tata Hydro-Electric Agencies, Ltd., Bombay.*

I have the honour to refer to the Government of India, Commerce Department, Resolution No. 707-T. (1), dated the 11th May, 1931, a copy of which I enclose.

2. The Indian Cable Company, Ltd., who are the applicants for protection suggest that a protective duty either of 10 per cent. for five years or of 15 per cent. for three years should be imposed on all electrical conductors over  $\frac{1}{80}$ th sq. inch in sectional area whether insulated or un-insulated, other than paper insulated cables. The Board would be glad if you would prepare a detailed estimate showing how the above suggestions, if accepted either for both insulated cables and bare conductors or for bare conductors only, would increase the capital expenditure required for a Hydro-Electric Project similar to yours. The Board would also like to have an estimate of the extent to which it would be necessary to raise the price of electricity to the consumer in each case.

3. I am also to ask that you will be good enough to furnish a statement showing the prices of any (i) bare hard drawn electrolytic copper wire and (ii) rubber insulated cables, not less than  $\frac{1}{80}$ th sq. inch in sectional area which has recently been imported by you. The statement should give full particulars regarding the classes and sizes of wire or cable for which prices are given and the price should be shown under the separate headings c.i.f., landing charges, duty, freight to destination.

4. The Board would also be glad to know if you have purchased any wire or cable from the Indian Cable Company, Calcutta. If so, kindly state the quantities purchased and how the Indian manufactured articles compare with the imported articles as regards quality and price.

5. I am to ask that the reply to this letter together with five spare copies may be sent not later than July 4th.

**Tata Hydro-Electric Agencies, Ltd.**

*Letter, dated the 8th July, 1931.*

We have the honour to acknowledge receipt of your letter, dated 1st June, 1931, and regret the delay in replying, but some considerable time was required for examining the old records bearing on the subject.

The three Hydro-Electric Companies under our management are now in the operating stage and the last purchases of bare copper conductor in large quantities were made during and before 1925 for the construction of the transmission lines of the Tata Power Company. About 570 tons were purchased at a total cost of approximately Rs. 8,90,000. The conductor is 7 strand bare copper cable with a normal area of .095 sq. inch. An addition of the suggested increase of 15 per cent. to the above cost would mean an extra expenditure of about Rs. 1,30,000 in a total capital cost of about Rs. 6,73,50,000, an increase in the total capital cost of 19 per cent. You will therefore observe that the suggested increase will not seriously affect a Hydro-Electric project similar to ours and it would not be therefore necessary to raise the price of electrical energy to the consumers.

The cost of constructing a power scheme similar to ours is large in proportion to the cost of the conductors and therefore the proposed duty will not materially enhance the cost of power to the consumer, but in the case of a Distributing Licensee with a very large Low Tension overhead distribution system the proposed duty will be a considerable percentage of the



total cost and will probably result in an increased cost to the small consumers.

Our Low Tension distribution system is at 6,600 and 22,000 volts, most of which is underground and for which paper insulated cables have been used and therefore the proposed duty, which is not applicable to paper insulated cables, will not have any effect on a Hydro-Electric scheme similar to ours.

We regret we are not able to give detailed information as to the effect on the total cost of a Hydro-Electric scheme similar to ours of the application of the proposed duty to rubber insulated wires. The rubber insulated wires and cables used have all been supplied by the manufacturers of generators, transformers, switchgears, etc., and the prices are included in the total cost of the several items of station plant and we are not able to separate them.

As regards the 4th paragraph of your enquiry, we would inform you that quotations are invited from the Indian Cable Co. through their local Agents, but they have not secured any of our important orders due to their high prices or time of delivery.

We have confined ourselves to the effect of the proposed protective duty on a Hydro-Electric system with very little overhead distribution which would be affected by the proposed duty, and to the questions asked, as we are sure you have invited replies from Distributing Licensees such as The Bombay Electric Supply and Tramways Co. who take power in bulk from us for distribution and who will be in a better position to state how far this protective duty would affect their system.

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*Letter No. 373, dated the 29th June, 1931, from the Tariff Board, to (1) The Bombay Telephone Co., Ltd., (2) The Bengal Telephone Corporation, Ltd., and (3) The Madras Telephone Co., Ltd.*

I have the honour to refer to the Government of India, Commerce Department, Resolution No. 707-T. (1), dated the 11th May, 1931, a copy of which I enclose.

2. The Indian Cable Co., Ltd., who are the applicants for protection, suggest that a protective duty either of 10 per cent. for five years or of 15 per cent. for three years should be imposed on all electrical conductors over  $\frac{1}{8}$ th sq. inch in sectional area whether insulated or uninsulated, other than paper insulated cables. The Board would be glad if you would prepare a detailed estimate showing how the above suggestions, if accepted either for both insulated cables and bare conductors or for bare conductors only, would increase the capital expenditure required for a telephone system similar to yours. The Board would also like to have an estimate of the extent to which it would be necessary to raise telephone rates in consequence.

3. I am also to ask that you will be good enough to furnish a statement showing the prices of any (i) bare hard drawn electrolytic copper wire and (ii) rubber insulated cables, not less than  $\frac{1}{8}$ th sq. inch in sectional area which have recently been imported by you. The statement should give full particulars regarding the classes and sizes of wire or cable for which prices are given and the price should be shown under the separate headings, c.i.f., landing charges, duty, freight to destination.

4. The Board would also be glad to know if you have purchased any wire or cable from the Indian Cable Co., Calcutta. If so, kindly state the quantities purchased and how the Indian manufactured articles compare with the imported articles as regards quality and price.

5. I am to ask that the reply to this letter together with 5 spare copies may be sent not later than July 25th. It should be addressed to the Secretary, Indian Tariff Board, 1, Council House Street, Calcutta.

**Madras Telephone Co., Ltd., Madras.***Letter, dated the 1st July, 1931.*

With reference to your letter No. 373, dated the 29th June, 1931, we give below the information required in as concise a form as possible:—

1. The Madras Telephone Co., Ltd., operates under a License from The Secretary of State in Council in Madras city only. Special permission has to be obtained to instal telephone service anywhere beyond Municipal limits.

2. The Company has a comprehensive system of underground cables which tends to reduce overhead wire mileage to a minimum.

3. Normally No. 14 S. W. Gauge Iron Wire is used, but No. 14 H. D. Copper Wire is used on long lines, the quantity so used being relatively small.

4. For internal wiring 1 pair, lead covered wire is used, and for terminations from coilings V. I. R. insulated wire is used.

5. The imposition of the proposed protective duty would result in the Company having to pay a higher price for such items as were given the benefit of such protection.

6. We do not think the imposition of such a duty would raise construction costs sufficiently to warrant the increasing of rates for Telephone Services, but if the principle was extended to include insulated multi-core cables, whether the insulation be paper or any other material, the added cost of construction might conceivably result in rates for Telephone Services being raised by, say, from 5 per cent. to 10 per cent. We are, therefore, of opinion that multi-core telephone cable should be expressly omitted from the proposed new tariff.

7. Where possible and when prices are competitive we purchase stores in India.

8. We tabulate below details of—

(1) recent purchases from Europe, and

(2) H. D. Copper Wire purchased from the Indian Cable Co.

(1) Cable, enamelled and cotton covered, 1 pair lead covered—

Quantity.	Invoice	Freight and	Duty and land-	Total	Average price
	price.	insurance.	ing costs.	cost.	per mile.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
16 miles.	2,525 4 7	243 7 4	496 9 9	3,265 5 8	204 1 4

V. I. R. Insulated Wire, purchased locally—

5,900 yds., cost Rs. 366-0-2, average price per 100 yds. Rs. 6-5-3.

(2) Purchased from Indian Cable Co.—

1,630 lbs. H. D. Copper Wire, Re. 0-12-3 per lb., delivered in Madras.

9. The wire purchased from the Indian Cable Co. compares favourably with wire of English manufacture and is definitely better than that of Continental make.

**Bengal Telephone Corporation, Ltd., Calcutta.***Letter, dated the 3rd July, 1931.*

We are in receipt of the Secretary's, Tariff Board, Ootacamund, letter No. 373, dated the 29th ultimo, wherein he states that the reply to his letter should be addressed to you, and we beg to state as follows:—

*Paragraphs 2 and 3.*—Paper Insulated Cables comprise the whole of the Copper Conductors imported by us, and all are of a section less than .0125 sq. inch. Copper Conductors of a gauge greater than .0125 sq. inch are never likely to be used by us even for junction circuits, the larger sizes

being only used for trunk circuits. The suggested protective duty does not, therefore, interest us at all.

*Paragraph 4.*—Quantities of wires and cable purchased from the Indian Cable Co. by us between the period 1st July, 1930, and 30th June, 1931, are as follows:—

*Item 1.*—17 miles—

One pair—parallel twin '036 L. C.—V. N. P.

Price—Rs. 465 per mile.

*Item 2.*—19 miles—

One pair—twin '036 L. C.—V. N. P.

Price—Rs. 456 per mile.

*Item 3.*—3 miles—

Twin Flex. Cab Tyre sheathed.

Price—Rs. 44.11 per 100 yards.

*Item 4.*—29 miles—

Jumper Wire—Twin twisted and Triple twisted '025 V. N. P. and C. C. and Flameproof.

Price—Triple—

Rs. 16-8 per 100 yards.

Rs. 12-8 per 100 yards.

Items 1 and 4 are made to our requirements.

The prices quoted for Items 3 and 4 are normal. The materials so far supplied us have been up to the standard demanded and have been quite satisfactory. It will be noted that under Items 1, 2 and 4 V. N. P. is quoted. This has been directly to our orders as we have found that "Vulcanised No Pure" is preferable here to V. I. R. The insulation in megohms may not be so high but the lasting qualities of V. N. P. as compared to V. I. R. cannot be denied.

### **The Bombay Telephone Co., Ltd., Bombay.**

*Letter No. C, dated the 22nd July, 1931.*

I have the honour to refer to your letter No. 373 of the 29th June last.

I regret that shortage of staff and of the time available make it impossible to supply some details which might be obtained in other circumstances and I therefore confine myself to the questions of principle.

(1) From the point of view of an operating Telephone Co., there seems to be little doubt that any tariff on plant used by the Company in its construction must lead to increased cost of construction and thus tend towards increased charges for telephones.

(2) My Company has purchased certain sizes of cable from the Indian Cable Co. but it is not in a position to compare the articles as regards quality with imported articles owing to the shortness of the time which has elapsed since the purchases were made.

*Letter No. 374, dated the 29th June, 1931, from the Tariff Board, to (1) The Bombay Electric Supply and Tramway Co., Ltd., (2) The Calcutta Electric Supply Corporation, Ltd., and (3) The Madras Electric Supply Corporation, Ltd.*

I have the honour to refer to the Government of India, Commerce Department, Resolution No. 707-T. (1), dated the 11th May, 1931, a copy of which I enclose.

2. The Indian Cable Co., Ltd., who are the applicants for protection, suggest that a protective duty either of 10 per cent. for five years or of

15 per cent. for three years should be imposed on all electrical conductors over  $\frac{1}{80}$ th sq. inch in sectional area whether insulated or uninsulated, other than paper insulated cables. The Board would be glad if you would prepare a detailed estimate showing how the above suggestions, if accepted either for both insulated cables and bare conductors or for bare conductors only, would increase the capital expenditure for an Electric Supply Scheme similar to yours. The Board would also like to have an estimate of the extent to which it would be necessary to raise the price of electricity to the consumer in each case.

3. I am also to ask that you will be good enough to furnish a statement showing the prices of any (i) bare hard drawn electrolytic copper wire and (ii) rubber insulated cables, not less than  $\frac{1}{80}$ th sq. inch in sectional area which have recently been imported by you. The statement should give full particulars regarding the classes and sizes of wire or cable for which prices are given and the price should be shown under the separate headings c.i.f., landing charges, duty, freight to destination.

4. The Board would also be glad to know if you have purchased any wire or cable from the Indian Cable Co., Calcutta. If so, kindly state the quantities purchased and how the Indian manufactured articles compare with the imported articles as regards quality and price.

5. I am to ask that the reply to this letter together with 5 spare copies may be sent not later than July 25th. It should be addressed to the Secretary, Indian Tariff Board, 1, Council House Street, Calcutta.

### **The Madras Electric Supply Corporation, Ltd.**

*Letter, dated the 13th July, 1931.*

We have the honour to acknowledge receipt of letter No. 374, dated the 9th ultimo, from the Secretary, Tariff Board, Ootacamund, regarding the question of a proposed tariff on imported rubber insulated wires and bare copper wires of over  $\frac{1}{80}$ th sq. inch in sectional area.

We note that the applicants for protection are the Indian Cable Co., Ltd., but, as we have not used any of their wires, we are not in a position to compare the quality of their goods with wires made by the well-known firms of cable makers.

We have found from experience that it is most unsatisfactory to use any electrical conductors which do not carry the guarantee of the Cable Makers' Association or similar Association. We ourselves only use such guaranteed conductors, as we know that the guarantee is backed by experience and research.

Should the protective tariff of 15 per cent. be placed on imported electrical conductors, we consider that this tariff would chiefly affect the cheap Continental insulated wires. These are already of notoriously poor quality, and the quality would probably be further reduced, in order to lessen the price, so that they could compete with the local product. In this connection, we would remark that we think that probably it is not the high grade imported wires which are affecting the Indian Cable Co., but those cheap Continental grades of wires.

If the Indian Cable Co. intend to manufacture high grade wires, then it would appear to be far more satisfactory if a Government Testing Department were established, and only such wires as satisfactorily pass the tests should be permitted to be put on the Indian market. If, however, the Indian Cable Co. intend to manufacture a cheap grade of wire, then a tariff of 15 per cent. on imported wires would place an unjust burden on firms manufacturing only high grade material and the average consumer would be forced to use the poor quality wires.

Low grade electric wires are undoubtedly a source of danger, and are the cause of a great deal of dissatisfaction amongst consumers. The latter are usually entirely ignorant of the properties of electrical conductors,

insulation, etc., and they should be protected from being exploited by the cheap Continental Cable Cos.

Should a protective tariff of 15 per cent. be put on all imported wires, it will materially increase the cost of our mains extensions. The actual sum would be about Rs. 6,000 per annum. In the letter under reply it is stated "The Board would like to have an estimate of the extent to which it would be necessary to raise the price of electricity to the consumer". It is unlikely that the suggested protective tariff would render it necessary for a Supply Co. actually to raise its price per unit for current sold to consumers. Every additional burden put upon electrical accessories, however, tends to make any reduction in price most unlikely. As you are probably aware, there is a great demand at present for cheap electrical current, especially for power purposes.

As requested in paragraph 3 of the letter under reply, we enclose a statement showing the prices of bare and insulated copper wires recently imported by us.

To sum up the foregoing, we protest against the increase of the duty on electrical conductors and insulated wires being enhanced, as it would tend to hinder the development of electric supply throughout the country, by unduly increasing the cost of an article which is essential to the distribution of electrical energy.

Enclosure.

*Statement showing prices of imported bare insulated Copper Wires.*

Date Imported.	Description.	Quantity Imported.	Price, c.i.f. Madras.		Landing charges including boat hire, harbour dues, and sundries.		Duty.	Cart hire.		Total.
			Rs.	A. P.	Rs.	A. P.		Es.	Rs.	
1929.										
April	Bare Copper Trolley Wire No. 2.	2 tons	2,583	2 8	18	4 0	Free	5	8 0	2,606 14 8
1930.										
November	Rubber insulated Cable 7/20.	970 yds.	142	3 6	2	0 0	22	1	0 0	167 3 6
November	Rubber insulated Cable 8/20.	2,000 "	177	4 5	2	0 0	27	1	0 0	207 4 5
1931.										
January	Rubber insulated Cable 19/18.	1,200 yds.	780	8 10	7	12 0	39	2	12 0	880 0 10
May	Rubber insulated Cable 7/18.	3,998 "	1,527	6 2	10	0 0	76	2	12 0	1,616 2 2
June	Bare Copper Trolley Wire No. 2/0.	4 miles or 3½ tons.	2,871	1 10	27	10 0	Free	13	2 0	2,911 13 10
June	Bare Copper Trolley Wire No. 3/0.	1 mile or 1 ton.	782	11 8	7	11 0	"	8	8 0	783 14 8
June	Bare Copper Trolley Wire No. 6.	5 tons	3,741	0 0	33	6 0	"	16	8 0	3,790 14 0

13th July, 1931.

## Bombay Electric Supply and Tramways Co., Ltd.

*Letter, dated the 17th July, 1931.*

In reply to your letter No. 374 of the 29th June, 1931, addressed to us from Ootacamund, we have the honour to enclose herewith Schedules A, B, C and D showing respectively:—

- (a) Effect of duty on cost of 6 relatively large overhead Distribution Schemes.
- (b) Effect of increase of duty on rubber insulated cables in relation to 6 House Wiring Schemes.
- (c) Details of prices of bare copper and rubber covered conductors imported from abroad.
- (d) Comparative rates of bare copper and V. I. R. wires as per enquiries from the local market.

With reference to paragraph No. 3 of your letter, we regret we are unable to furnish any further information beyond that given in Schedule C as our requirements for other bare copper conductors and rubber insulated cables are small and are met entirely from the local market.

In bare copper conductors our imports are practically confined to Trolley Wires. The Indian Cable Co. have never quoted for such wires. We therefore presume that they are not equipped to manufacture this class of wire, which, besides being grooved, has to possess the special properties of durability and hardness necessary to withstand the heavy work which it is called upon to bear. These properties we understand are due to the presence of certain alloys in its composition. We would therefore submit that any Protective Tariff Duty on bare copper conductors should not be applicable to Trolley Wires as the Indian Cable Co. do not manufacture them.

As regards paragraph No. 4 of your letter, we have to inform you that we have recently purchased a few coils of the Indian Cable Co.'s V. I. R. wires for trial purposes. We are therefore unable to give our opinion at this stage as to their quality. We may however remark that the real test in judging the quality of a cable is the test of durability under practical conditions over an extended period.

In conclusion may we submit the following points for the consideration of your Board:—

- (1) That a rubber insulated cable is unlike most other manufactured articles in that a low grade and poor quality cable and a high grade and good quality cable have the same appearance and that the low class of cable can be manufactured at a *very low price*.
- (2) That the market at present is essentially one of price, and price being the ruling factor, the lower grades of cables have a very large market.
- (3) The poor classes of cables are imported both from the Continent and Japan. From our Schedule D it will be readily seen that the Continental prices are over 25 per cent. less than the Indian Cable Co.'s prices.
- (4) That a Protective Tariff Duty of even 15 per cent. will not therefore materially assist the Indian Cable Co. in enlarging their sales, for Continental Cables will still be 10 per cent. lower in prices.
- (5) That the Continental and Japanese Manufacturers are always in a position to reduce the price of their products by lowering their quality.
- (6) The Indian Cable Co. therefore require a Protective Duty not on all the cables that are now being imported into India but

- only on the lower grades of cables which are selling in the market and which are their real competitors.
- (7) That the only way of giving any measure of protection is to levy sufficiently high duties on the lower grades of cables which we submit should be tested at the port of entry.
- (8) That as the Indian Cable Co. manufacture their wires and cables according to the B. E. S. A. and C. M. A. English standards which are generally accepted as a "Hall Mark" the Protective Duty if granted should only be levied on cables and wires which fall below these standards.

#### SCHEDULE A.

- Effect of duty on cost of overhead distribution schemes.

Serial No.	Total cost of scheme.	Cost of bare copper conductors.	10 per cent. Duty.		15 per cent. Duty.	
			Revised cost of scheme.	Increase over total cost.	Revised cost of scheme.	Increase over total cost.
			Rs.	Per cent.	Rs.	Per cent.
1	1,24,000	82,072	1,27,207	2.6	1,28,810	3.9
2	72,430	19,063	74,335	2.6	75,288	4.0
3	94,800	39,000	98,700	4.1	1,00,650	6.2
4	42,241	20,643	44,305	4.9	45,387	7.1
5	1,15,000	35,944	1,18,595	3.1	1,20,392	4.7
6	81,800	30,051	84,805	3.7	86,308	5.5
<b>TOTAL</b>	<b>5,30,271</b>	<b>1,76,763</b>	<b>5,47,947</b>	<b>3.3</b>	<b>5,56,785</b>	<b>5.0</b>

#### SCHEDULE B.

Effect of increase of duty on cost of house wiring schemes.

Serial No.	Total cost of scheme.	Cost of V. I. E. wires.	10 per cent. Extra Duty.		15 per cent. Extra Duty.	
			Revised cost of scheme.	Increase over total cost.	Revised cost of scheme.	Increase over total cost.
			Rs.	Per cent.	Rs.	Per cent.
1	260	89	268	1.15	265	1.92
2	1,060	142	1,074	1.32	1,081	1.98
3	1,505	192	1,524	1.26	1,534	1.93
4	1,689	234	1,713	1.42	1,724	2.07
5	2,000	222	2,022	1.10	2,033	1.65
6	4,800	623	4,863	1.31	4,894	1.96
<b>TOTAL</b>	<b>11,314</b>	<b>1,448</b>	<b>11,459</b>	<b>1.28</b>	<b>11,531</b>	<b>1.92</b>

SCHEDULE C.

Details of prices of Bare Copper and Rubber Covered Conductors imported from abroad.

	Quantity imported during 1930.	Cost f.o.r. London.	Actual cost d/d Stores.			Duty.	Dock dues.	Clearing charges.	Total d/d Stores.
			Freight.	Insurance.	Total c.i.f. cost.				
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bare Copper Trolley Wire, size 2/0 S. W. G., grooved, English manufacture.	6 tons	645 0 0	17 18 0	2 0 0	664 15 0	..	18 0 0	21 12 0	8,898 4
					Rs. A. P.				
					8,858 8 0,				
					£ s. d.				
Single Core Rubber Insulated, Taped and Braided Cable, 600 meghom, size .0225 sq. inch.	1,000 yds.	43 19 9	1 10 3	0 4 3	45 14 3	29 14 0	0 11 0	0 14 0	640 15 0
					Rs. A. P.	Per cent.			
					609 8 0	5			

The c.i.f. price has been calculated at a fixed Exchange rate of 1s. 6d.



SCHEDULE D.

B. E. S. AND T. COMPANY'S ANNUAL STORES CONTRACT.

Tender rates received for Bare Copper and V. I. R. Wires from local market.

Specification.	Our annual consumption.	Local rate.		
		English.	Indian Cable Company.	Continental.
	Yards.	Per 100 yards. Rs. A. P.	Per 100 yards. Rs. A. P.	Per 100 yards. Rs. A. P.
1 sq. inch single Conductor V. I. R. Cable, 2,500 megohm grade.	1,000	193 15 0	184 4 0	134 0 0
.2 Ditto ditto .	1,000	365 3 0	346 15 0	260 0 0
.3 Ditto ditto .	600	534 2 0	507 7 0	330 0 0
.5 Ditto ditto .	600	854 14 0	811 3 0	540 0 0
.0225 sq. inch single Conductor V. I. R. Cable, 600 megohm grade.	500	45 5 0	43 1 0	28 0 0
	Cwt.	Per lb. Rs. A. P.	Per lb. Rs. A. P.	Per lb. Rs. A. P.
No. 2 S. W. G. Bare Copper Wire . . . . .	5	0 9 6	0 6 4	....
No. 5 Ditto . . . . .	2	0 9 6	0 6 4	....

**The Calcutta Electric Supply Corporation Limited.**

*Letter dated the 25th July, 1931.*

We have the honour to acknowledge the receipt of your letter No. 374, dated the 29th June, regarding the question of a proposed tariff on all imported electrical conductors of over 1/80th square inch in sectional area.

The imposition of this proposed enhancement of protective duty on imported cables would be bound to re-act on the consumer of electric current, if not perhaps by any immediate increase in the charge for current, certainly by considerable delay in the prospect of any reduction of rates which may now, or in the near future, be considered.

It is generally agreed that the use of any cables not carrying the Cable Makers Association or similar guarantee, is very unsatisfactory and if this protective Tariff is imposed on imported conductors the effect would probably be brought to bear mostly on those of inferior Continental manufacture. The Manufacturers of this class of cable would immediately reduce the price by making a cable of inferior quality in order to compete with cables of local manufacture and to enable them to keep their footing on the local market.

The industry is governed by the question of price and the imposition of this proposed protective duty would, in our opinion, flood the market with inferior cables to effect reasonable competition with firms manufacturing in India.

From the above remarks it would appear that as the Indian Cable Company's system of manufacture conforms with that of the B. E. S. A. and Cable Makers Association standards, their actual competitors are the manufacturers of the lower grade cables imported to India only and not those operating in this country.

Attached is a statement (A) giving full particulars as desired regarding the bare hard drawn electrolytic copper wire imported by us in the year 1930.

We would point out in connection with the statement that this Company is now annually converting a considerable portion of its overhead system to underground distribution and in consequence the importation of bare hard drawn electrolytic copper wire shews a marked reduction over the quantity purchased in previous years.

With reference to paragraph 3 (ii) of your letter, no rubber insulated cables have been imported by us.

A further Statement (B) is attached shewing the size, quantity and price paid for rubber insulated cable purchased from the Indian Cable Company in 1930.

With regard to the quality of the cable manufactured by this Company, we consider that it compares very favourably with the cable manufactured by the Cable Makers Association.

As it has been our policy to support the Indian Cable Company the imposition of an import duty on rubber covered cables would not at the moment directly concern us. We maintain, however, that any increase in the present duty imposed on Electrical Conductors and insulated wires would immediately retard the progress of an industry which in India is still in the pioneer stage of development, a fact in itself which merits all possible assistance.

This matter has been dealt with at length in my letter representing the case for the British India Electric Committee and we would ask you to read that letter in conjunction with this reply to your communication under reference.

## STATEMENT "A".

## CALCUTTA ELECTRIC SUPPLY CORPORATION, LTD.

*Particulars of Copper Wire imported during the year 1930.*

Particulars.	Weight.	Cost F. O. B.	Freight.	Delivery.	Total Cos.
	T. C. Q. lb.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
<b>Hard Drawn Copper Wire—</b>					
No. 4 S. W. G. or 04227.	2 0 1 2	2,595 7 1	8 1 0	21 8 6	2,625 0 7
No. 6 S. W. G. or 02895.	7 5 0 0	10,396 12 6	32 3 0	73 3 0	10,502 2 6
No. 8 S. W. G. or 02011.	6 0 1 7	7,603 13 6	26 2 6	38 1 6	7,668 1 6
<b>Hard Drawn Stranded Wire—</b>					
19/072 . . .	2 0 0 1	2,668 2 0	10 15 0	13 0 0	2,692 1 0
19/052 . . .	1 0 1 27	1,373 14 8	5 7 6	6 8 6	1,385 14 8
	<u>18 6 0 9</u>	<u>24,638 1 9</u>	<u>82 13 0</u>	<u>152 5 6</u>	<u>24,873 4 3</u>

## STATEMENT "B".

## CALCUTTA ELECTRIC CORPORATION, LTD.

*Particulars of Rubber Covered Cable purchased from the Indian Cable Co., during the year 1930.*

Size.	Number of coils.	Length in Yds.	Cost. Rs. a.
3/20, Single . . .	27	2,700	327 6
3/22, Single . . .	42	4,200	372 12
7/22, Single . . .	169	16,900	2,387 2
7/20, Single . . .	125	12,500	2,632 13
7/16, Single . . .	224	22,400	10,500 0
7/18, Single . . .	71	7,100	2,520 8
19/083", Single . . .	14	1,400	2,667 0
19/064", Single . . .	23	2,300	2,839 1
19/18", Single . . .	20	2,000	1,797 8
20" or 37/14 . . .	1	100	369 14
	<u>716</u>	<u>71,600</u>	<u>26,414 0</u>

*Letter No. 318, dated the 1st June, 1931, from the Secretary, Tariff Board, to All Local Governments.*

I am directed to refer to the Government of India, Commerce Department, Resolution No. 707-T. (1), dated the 11th May, 1931, regarding the grant of protection to the manufacture of electric wires and cables.

2. I am to say that the Indian Cable Company, Limited, Calcutta, who are the applicants for protection, have suggested that a protective duty should be imposed on all electrical conductors over  $\frac{1}{16}$ th square inch in sectional area whether insulated or uninsulated, other than paper insulated cables, either of 10 per cent. for five years or of 15 per cent. for three years. I am to ask if you will be good enough to have prepared and forwarded to the Board a detailed estimate showing how the above suggestions, if accepted either for both insulated cables and bare conductors or for bare conductors only, would increase the capital expenditure required for any Hydro-Electric Project or Municipal Electric Supply Scheme in which the Government of is interested. The Board would also be grateful for an estimate of the extent to which it would be necessary to raise the price of electricity to consumers in each case.

3. I am also to ask if you will be good enough to furnish a statement showing the price of any (i) bare hard drawn electrolytic copper wire and (ii) rubber insulated cable not less than  $\frac{1}{16}$ th square inch in sectional area which have been imported recently for any hydro-electric project or electric supply scheme in which the Government of is interested. The statement should give full particulars regarding the classes and sizes of wire or cable for which prices are given and the price should, if possible, be shown under the separate headings c.i.f. landing charges, duty, freight to destination.

4. I am also to ask whether the Government of have purchased cables and wires from the Indian Cable Company, Limited, Calcutta. If so, the Board would be glad to know what quantities have been purchased and how the Indian manufactured articles compare with imported articles as regards quality and price.

5. Finally, I am to say that the Board would be glad to receive the opinion of the Government of should they care to express any, either on any particular points arising from this enquiry or on the general question of protection to the manufacture of electric cables in India. I am to say that the time at the disposal of the Board is limited and the Board would be grateful if the reply to this letter with five spare copies could be sent as early as possible and not later than July 4th.

### **Government of Burma.**

*Letter No. 130-K-31 (415/31), dated the 1st July, 1931.*

I am directed to acknowledge with thanks, the receipt of your letter No. 318/C-10, dated the 1st June, 1931, and to reply *seriatim* to the questions raised by your reference. At present the Government of Burma are not interested in any Hydro-Electric project or Municipal Electric Supply Scheme either in progress or under contemplation, nor have they imported any bare hard-drawn electrolytic copper wire or rubber insulated cable of the dimensions specified. The Government of Burma have not hitherto had occasion to buy cables and wire from the Indian Cable Co., Ltd., Calcutta. Practically all Government electric works are carried out by contract and the contractor is allowed freedom to obtain the cables and wires in the cheapest market provided that these comply with Government specification. On the general question of protection to the manufacture of electric cables in India I am to observe that the Indian Cable Company already enjoys a considerable measure of protection in the existence of a 20 per cent. Customs Tariff on all electric wires and cables below a certain

size. These form the bulk of the imports into this province. This Government is at present engaged in an endeavour to reduce the rates charged for the supply of Electric energy by small indigenous commercial undertakings. These are comparatively numerous in Burma, and are of great economic importance in a country which has no coal and depends for industrial progress on the cheap conversion of a high grade mineral oil into electric power. As a matter of general policy therefore, this Government cannot support any increase in the duty on cables, which like the duties on other industrial apparatus cannot but prove harmful to progress in Burma without conferring in return any commensurate advantages. This Government feels that through the existing protective duties, Burma already contributes more than its fair share to the prosperity of the Indian industrialist and feels itself bound to oppose a tariff which like the duty now proposed can only result in raising costs and postponing economic recovery.

### Government of Assam.

*Letter dated the 5th July, 1931.*

I am directed to refer to your letter No. 318/C-10, dated the 1st June, 1931, regarding the grant of protection to the manufacture of electric wires and cables.

In reply I am to say that as this Government are not directly interested in any Hydro Electric Project or Municipal Electric Supply Scheme, they have no data from which they could prepare estimates of the increase in capital expenditure which the adoption of a 10 per cent. or 15 per cent. protective duty would involve. The holders of Licenses under the Electricity Act in Assam are at present precluded from increasing their maxima unit rates and there does not at present appear to be any ground for anticipating that a protective duty of the kind proposed would necessitate an increase of the present maxima.

2. Regarding paragraphs 3 and 4 of your letter, I am to say that this Government are unable to supply any information as they have had no occasion to import electrolytic copper wire or rubber insulated cable or to purchase them from the Indian Cable Co., Ltd., Calcutta.

3. As to the general question—raised in paragraph 5 of your letter—whether the manufacture of electric cables in India requires or is deserving of protection, this Government are hardly in a position to offer useful advice. The Tariff Board in the first instance, and subsequently the Government of India, will no doubt satisfy themselves that the general conditions laid down in paragraphs 97-98 of the Indian Fiscal Commission's Report are satisfied.

### Government of Bihar and Orissa.

*Letter No. 201/IIC-39/31/Com. R., dated the 5th July, 1931.*

*Subject:—GRANT OF PROTECTION TO THE MANUFACTURE OF ELECTRIC WIRES AND CABLES.*

With reference to your letter No. 318/C-10, dated the 1st June, 1931, on the subject noted above, I am directed to say that the information called for in paragraphs 2 and 3 of the letter is not readily available and would take a considerable time to collect from Electric Supply Companies.

2. As regards the information asked for in paragraph 4 of the letter I am to state that only bare copper wire was purchased by the Public Works Department of this province during last year from the Indian Cable Company. A statement of the purchases made is annexed. No comparison as regards price can be made as no other purchases were effected.

Order No. and date.	Nature of indent of bare copper and SCC and DSC copper;
9525, dated the 25th July, 1930 (44).	No. 28 S. W. G. S. C. C. wire—80 lbs. at Rs. 2-1-9 per lb. No. 24 S. W. G. D. O. C. wire—50 lbs. at Rs. 1-3-9 per lb.
10930, dated the 21st August, 1930 (70).	No. 10 S. W. G. H. D. B. wire—120 lbs. at Rs. 45 per cwt. No. 6 S. W. G. H. D. B. wire—600 lbs. at Rs. 48-4-0 per cwt. No. 4 S. W. G. H. D. B. wire—720 lbs. at Rs. 48 per cwt. No. 1/0 S. W. G. H. D. B. wire—1,030 lbs. at Rs. 47 per cwt. Based at £52 per ton.
12836, dated the 11th October, 1930.	No. 10 S. W. G. H. D. B. wire—240 lbs. at Rs. 42-5-4 per cwt. No. 6 S. W. G. H. D. B. wire—480 lbs. at Rs. 45-9-4 per cwt. No. 4 S. W. G. H. D. B. wire—560 lbs. at Rs. 45-5-4 per cwt. Based at £48 per ton.
12635, dated the 6th October, 1930.	No. 10 H. D. C. wire—40 lbs. at Rs. 42-5-4 per cwt. Based at £48 per ton.
13547, dated the 20th October, 1930.	No. 32 S. W. G. S. C. C. B. C. C.—20 lbs. at Rs. 2-11-9 per lb. No. 34 S. W. G. S. C. C. B. C. C.—6 lbs. at Rs. 3-4-3 per lb.
1953, dated the 13th February, 1931.	No. 10 H. D. B. C. wire—282 lbs. at Rs. 48-9-6 per cwt. (I. S. D. rate) and Rs. 49-4-2 per cwt. (market rate). Based at £48 per ton.
6140, dated the 16th May, 1931.	No. 6 S. W. G. H. D. B. C. wire—900 lbs. at Rs. 41-10-4 per cwt. (I. S. D. rate) and Rs. 38-15-10 per cwt. (market rate).

### Government of Bombay.

*Letter dated the 9th July, 1931.*

With reference to your letter No. 318/C-10, dated the 1st June, 1931, on the subject mentioned above, I am directed by the Governor in Council to forward herewith a copy of letter No. 8928/31, dated the 24th June, 1931, together with copies of its accompaniments from the Bombay Electric Supply and Tramways Co., Ltd., one of the most important electric supply concerns in the Bombay Presidency, which gives the information you require. Similar information has been called for from the Tata Hydro-Electric Companies and is still awaited.

2. From the statements furnished by the Bombay Electric Supply and Tramways Co., Ltd., it will be seen that if a 10 per cent. protective duty

is imposed on electrical conductors the total cost of an over-head distribution scheme or a house wiring scheme will not be much affected. This Government will, so far as expenditure on Government buildings is concerned, have no objection if some such protective duty is imposed on this class of materials.

3. With regard to paragraph 4 of your letter, I am to state that the following kinds of wire manufactured by the Indian Cable Company have been obtained and are in use in the Electrical Branch of this Department. They are found to be equally satisfactory in respect of quality and price compared with wires imported from abroad.

28 lbs. D. C. C. wire No. 13.

14 lbs. D. C. C. wire No. 20.

14 lbs. D. C. C. wire No. 15.

3 lbs. D. C. C. wire No. 25.

10 lbs. S. C. C. wire No. 26.

34 lbs. S. C. C. wire No. 27.

94 lbs. S. C. C. wire No. 28.

240 lbs. B. C. wire No. 10.

180 lbs. B. C. wire No. 8.

4. As desired by you, five spare copies of this letter with copies of its accompaniments are enclosed herewith.

Enclosure.

*Copy of letter No. 8928/31, dated the 24th June, 1931, from the Bombay Electric Supply and Tramways Co., Ltd., to the Electrical Engineer to Government, Public Works Department, Bombay.*

**Re PROTECTION TO CABLE OR BARE COPPER WIRE OF INDIAN MANUFACTURE.**

With reference to the subject matter of your letter No. G. 105/A.-2873 of the 19th instant, we have the honour to enclose herewith schedules A, B and C, showing respectively—

- (a) Effect of Duty on cost of 6 relatively large over-head Distribution Schemes.
- (b) Effect of increase of Duty on rubber insulated cables in relation to 6 House Wiring Schemes.
- (c) Details of prices of Bare Copper and Rubber Covered Conductors imported from abroad.

With reference to latter part of your letter, we regret we are unable to furnish any further information beyond that given in Schedule C as our requirements for other bare copper conductors and rubber insulated cables of over 1/80 sq. inch in sectional area are small and met entirely from the local market.

In bare copper conductors our imports are practically confined to trolley wire only. We would point out in this connection that any Protective Tariff Duty on Bare Copper Conductors over 1/80 sq. inch in sectional area, should not be applicable to Trolley wires as the Indian Cables Co. does not appear to be capable of manufacturing grooved wires of this class.

In conclusion we must state that we strongly object to any further Tariff Duties which would enhance the cost of House Wiring and Distribution Schemes and therefore generally retard the progress of electrification.

## SCHEDULE A.

*Effect of duty on cost of overhead distribution schemes.*

Serial No.	Total cost of scheme.	Cost of bare copper conductors.	Under 10 per cent. Duty.		Under 15 per cent. Duty.	
			Revised cost of scheme.	Increase over total cost.	Revised cost of scheme.	Increase over total cost.
	Rs.	Rs.	Rs.	Per cent.	Rs.	Per cent.
1	1,24,000	32,072	1,27,207	2.6	1,28,810	3.9
2	72,430	19,053	74,335	2.6	75,288	4.0
3	94,800	39,000	98,700	4.1	1,00,650	6.2
4	42,441	20,643	44,305	4.9	45,337	7.1
5	1,15,000	35,944	1,18,595	3.1	1,20,392	4.7
6	81,800	30,051	84,805	3.7	86,308	5.5
Totals	5,30,271	1,76,763	5,47,947	3.3	5,56,785	5.0

## SCHEDULE B.

*Effect of increase on duty on cost of house wiring schemes.*

Serial No.	Total Cost of scheme.	Cost of V. I. R. wires.	Under 10 per cent. extra Duty.		Under 15 per cent. extra Duty.	
			Revised cost of scheme.	Increase over total cost.	Revised cost of scheme.	Increase over total cost.
	Rs.	Rs.	Rs.	Per cent.	Rs.	Per cent.
1	260	30	263	1.15	265	1.92
2	1,060	142	1,074	1.32	1,081	1.98
3	1,505	192	1,524	1.26	1,534	1.93
4	1,689	234	1,713	1.42	1,724	2.07
	2,000	222	2,022	1.10	2,033	1.65
6	4,800	628	4,863	1.31	4,894	1.96
Totals	11,314	1,448	11,459	1.28	11,531	1.92



SCHEDULE C.

Details of prices of Bare Copper and Rubber covered conductors imported from abroad.  
B. E. S. AND TRAMWAYS CO., LTD.

Specification.	Quantity imported during 1930.	Actual Costs d/d Stores.							
		Cost f.o.b. London.	Freight.	Insurance.	Total* c.i.f. Bombay.	Duty.	Dock Dues.	Clearing Charges.	Total d/d Stores.
		£ s. d.	£ s. d.	£ s. d.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Bare copper wire: Trolley wire, Size 2/0 S. W. G. grooved. English Manufactured.	6tons	645 0 0	17 18 0	2 0 0	664 15 0	..	18 0 0	21 12 0	8,898 4 0
					8,858 8 0				
					£ s. d.				
Single core rubber insulated, taped and braided cable 600 megohm. Grade English Manufacture, size .0225 sq. in. (over 1/80 sq. in.)	1,000 yds.	43 19 9	1 10 3	0 4 3	45 14 3	29 14 0	0 11 0	0 14 0	640 15 0
					Rs. A. P.	Per cent.			
					609. 8 0	5			

\* The c.i.f. price has been calculated at a fixed exchange rate of 1s. 6d.

### Government of the Central Provinces.

*Letter No. 1371/1261/xiii, dated the 9th July, 1931.*

*Subject:—GRANT OF PROTECTION TO THE MANUFACTURE OF ELECTRIC WIRES AND CABLES.*

I am directed by the Governor in Council to refer to your letter No. 318-C.-10, dated the 1st June, 1931, on the subject noted above, and to reply as follows:—

*Paragraphs 2 and 3.*—There is no Hydro-Electric project or Municipal Electric Supply Scheme in which this Government is interested at present. All the electric supply undertakings in the province are owned by companies to whom licenses have been granted by Government. It is presumed that the Tariff Board has approached such companies direct.

*Paragraph 4.*—The Government of the Central Provinces has not purchased any cables and wires from the Indian Cable Co., Ltd., Calcutta.

*Paragraph 5.*—The proposed protective duty is not likely to affect other industries in this province to any appreciable extent.

### Government of Bengal.

*Letter No. 3443-Com., dated the 17th July, 1931.*

I am directed to refer to your letter No. 318/C.-10, dated the 1st June, 1931, on the above subject and to say that the only hydro-electric project or municipal electric supply scheme in Bengal is that of the Darjeeling Municipality, which was addressed in the matter, but which has not replied. The Corporation of Calcutta were also asked for a report, but they likewise have not replied.

2. As the Government of Bengal are not directly interested in any hydro-electric scheme or electric licence, the particulars asked for in paragraphs 3 and 4 of your letter are not available. The Electrical Division of the Public Works Department has not purchased cables and wires from the Indian Cable Co., Calcutta, so that that Department is not in a position to say anything as regards either the quality or the price of the products of the Indian Cable Co.

3. On general grounds, I am to say that the Government of Bengal are opposed to the imposition of any duty on electrical conductors or cables, as requested by the Indian Cable Co. That Company addressed a letter to the Electrical Adviser and Chief Electric Inspector, Bengal, a copy of which is enclosed, and from that letter it appears that the Company do not desire any enhancement of the import duty on high grade rubber insulated cables; their contention seems to be that only inferior and low-priced cables should pay the same amount of import duty as the high grade and more costly cables. The same request also applies to insulated and other conductors of a similar type. The inference would seem to follow that the Indian Cable Co. wish to be in a better position to compete in respect of the sale of low grade cables and conductors; on the other hand, they seem to claim that their own products are as good as any obtainable in India, whether imported into India or manufactured in India, and that the durability of their goods is better than that of similar goods. Under these circumstances, it seems difficult to understand why protection is required at all, especially as the raw materials from which their cable is made are imported free.

4. Experience in this province has been that small licensees find it difficult to run their undertakings at present prices, and it is considered that any increase in the price of materials will ultimately be reflected in the prices charged per unit of electricity to consumers. Even if this increase is in-

considerable, the margin of possible profit at present is so small that it might be sufficient to discourage further development. If bare copper wire is included, for example, a protective duty would undoubtedly deter prospective licensees proceeding with their proposals, for the cost of wire may roughly be taken as not less than  $\frac{1}{4}$  of the total capital cost of a licensee's undertaking, especially in small towns, where overhead lines are almost exclusively used. Any proposal which would lead to an increase in the cost of small cables is also to be deprecated, for this will ultimately lead to less wiring in consumers' premises with a resulting decrease in load, and higher cost per unit charged to the public.

5. The Government of Bengal are of the opinion that everything which is reasonably possible should be done to encourage the use of the best electric cables in India. The technical advisers of Government state that much harm has been done to India in the past by the utilization of wires and cables of inferior quality. The utilization of electrical apparatus of a high quality is necessary for the development of the electrical industry, and it is considered that the aim which the Indian Cable Co. desire to attain would more suitably be achieved by the introduction of legislation to discourage the importation of cables of inferior quality by means of the imposition of certain tests. Such legislation would guarantee India against the influx of cheap and bad cables, and at the same time would not militate against the interests of manufacturers in India who wish to put on the market good and lasting cables.

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*Copy of letter dated the 8th July, 1931, from the Indian Cable Co., Ltd., 2, Waterloo Street, Calcutta, to the Electrical Adviser and Chief Electrical Inspector, Government of Bengal, Calcutta.*

**APPLICATION FOR PROTECTIVE DUTY ON ELECTRIC WIRES AND CABLES.**

A general feeling appears to be current that this Company is endeavouring by means of an enhanced import tariff to place an increased burden on the user of Electric Cables and Wires. It will, we are sure, assist every one interested in this subject if we briefly explain the position.

(1) This Company was floated in 1920; commenced manufacture early in 1923; and sold the first large cables produced to The Tata Iron and Steel Co., Ltd., in July, 1923, to the value of Rs. 32,000. (These cables have been in continuous service since that date).

(2) After eight years trading the shareholders have had no return on their investment on either the Preference or Ordinary shares.

(3) An enhancement of the import duty on high grade rubber insulated cables is not desired. It is suggested that inferior and therefore low priced cables should pay the same amount of import duty as the high grade and therefore more costly cables.

(4) Protection is essential on uninsulated Conductors and other Conductors which might compete with these, such as weather-proof aerial conductors, over 1/80th sq. inch.

As it is not our intention that the price of Rubber Insulated Cables in general should be increased there is no need to go into this matter in detail. In passing we would mention that the low priced cable being imported into India (labelled as being 'equal' to another cable with which comparison is impossible on account of the vast difference in quality) is a very unfair form of competition apart from the fact that the use of this cable is dangerous to life and property. We have requested that cable that will not pass certain tests should not be admitted into a country like India where the average user knows nothing of respective qualities and is likely to be attracted by a low price to his own detriment. Failing this we suggest that low grade cable should pay the same amount of duty as good

cable, i.e., the duty should be a specific one of so much per coil irrespective of quality.

We trust that any inference that 'Indian Cables' are not what they are claimed to be—the best obtainable in India will be ignored. Naturally importers will oppose any tariff change that is opposed to their interests and this we expect. In doing this it is unfortunate that references have been made to the respective quality of certain High Grade cables and 'Indian Cables' to the detriment of the latter. We wish to assure all potential users of cable that there is no ground for the suggestion that we have encountered difficulties in manufacturing vulcanized India rubber in the tropics which will render it impossible to produce goods of the highest quality. We find in fact that the 'durability' of Indian cables exceeds that of imported cable, or in other words the rate of deterioration is much slower in consequence of the rubber having been manufactured in the temperature in which it is afterwards employed.

As regards uninsulated conductors an import duty is essential to the continuance of wire drawing in India. Manufacturers in other more developed countries, usually with a very remunerative home market, are apparently prepared to ship wire to this country at any figure which will take the business from the local factory.

The Tariff Board will go into the details later so that there is no need to quote figures to support our statements here.

Any duty on uninsulated conductors will have an infinitesimal effect on the cost of electricity and as the duty if applied, will only be in force for a limited period, it is necessary to consider whether the advantage of a local industry in intensifying competition and giving quick delivery compensates for the temporary penalty applied to secure its continuance.

In conclusion we would state that our interests are as closely connected with electrical development as those of Electric Supply Companies; Electrical Conductors; and possibly more so than those of importers, and that we would not suggest the further enhancement of certain import duties if we were not convinced that ultimately this industry will be instrumental in furthering the development which will mean a greater demand for all electrical goods including those produced at Tatanagar.

We have embodied in the enclosure attached extracts from some of the more interesting replies to the Tariff Board questionnaire as these will give an idea of our activities.

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### Government of Madras.

*Letter dated the 20th July, 1931.*

I am directed to forward copies of letters from the Electrical Inspector to this Government and the Chief Engineer, Hydro-Electric Development which furnish the particulars required by the Board, and to state that the Government agree with the views expressed in them. I am to add that, as the success of Government Hydro-Electric Schemes and Municipal electric supply undertakings in this Presidency depends on the supply of power at cheap rates, this Government would deprecate the imposition of a duty which would have the effect of necessitating an increase in the cost charged to the consumer. The letter of the Chief Engineer Hydro-Electric Development shows that the proposed duty would involve a raising of the cost to the consumer and that it would be ineffective unless applied to other materials. The result of extending the scope of the duty would be to raise costs still further: and it appears that the Company which has asked for the protective duty may be able to get into the market without protection in course of time.

Enclosure.

*From the Electrical Inspector to Government, Madras, No. 2724, dated the 25th June, 1931.*

With reference to the Tariff Boards letter No. 318-C-10, dated the 1st June, I would state that the value of the (copper) *wire* and (rubber insulated) *cable* both over 1/80 sq. inch sectional area in an average municipal electric supply scheme would be about Rs. 25,000. At present the only municipal scheme under construction is at Masulipatam; later on Virudhunagar and Vizianagram are expected to be taken up on Government loans. The Chief Engineer, Hydro-Electric Development, will no doubt report on Coimbatore and other municipal towns in the hydro-electric scheme. An extra duty of 10 per cent. to 15 per cent. would not necessitate the price of electricity to the consumers being raised.

2. I have not been able to obtain the detailed data with reference to paragraph 2 of the Tariff Board's letter. I have written to 9 municipalities and from their replies report as follows:—

- (a) In the last year 32 tons of *wire* mostly sizes 4, 6 and 8 S. W. G. were imported; in the next 3 years the municipal electrical engineers anticipate an equal amount spread over the three years.
- (b) In the last year a very small quantity of *cable*, sizes .0145, .0225 and .046 sq. inch to the value of Rs. 4,000, was imported; and in the next three years approximately Rs. 6,000 worth, spread over the three years, is expected to be imported. These prices are for the material at site and the quantity is petty.

3. With reference to paragraph 4, very little *wire* and *cable* from the Indian Cable Company have been purchased; one municipal electrical engineer considered that the quality of the *cable* was distinctly unsatisfactory; but in fairness to the Company I would add that they have been manufacturing for only 5 years now and at first they had their troubles.

4. As regards *wire* fully 75 per cent. of the quantity imported is over 1/80 sq. inch, is used for electric power lines and now enters duty free; any protective duty therefore would put up the cost of transmission and distribution, probably not to any serious extent—especially as in long transmissions aluminium and steel conductors are used mainly—but already electricity is handicapped by the costs of transmission and distribution: I think the best interests of the country would not be served by an import duty on such wires.

5. Further the Indian Cable Co. use both indigenous and imported copper; the cost of preparing *wire* therefrom is relatively small probably about 5 per cent. of the cost of the completed product and does not in my opinion warrant such a heavy duty as 10 per cent. to 15 per cent. to be on level terms with imported *wire*. I think a duty of 1 per cent. or at most 2 per cent. would suffice.

6. As regards *cable* fully 90 per cent. of the quantity imported is under 1/80 sq. inch, already pays an import duty of 20 per cent. and is used principally for electric installations in houses, offices and the like. Any protective duty on the larger sizes of *cable* would hit electric supply undertakings and industrial applications of electricity and would not be in the interests of electric development.

7. The proposal therefore—due clearly to the present slump in the copper market, copper is now selling at half the price of 2 years ago—can be only in the interests of the Indian Cable Co. and possibly the Indian Copper Corporation behind them; it is clearly not in the best interests of India where electrical development requires every possible encouragement.

*From the Chief Engineer, Hydro-Electric Development, No. 1704/31—1, dated the 2nd July, 1931.*

The cost of the conductors has always been a large proportion of the total cost of a transmission line, and in order to economize in construction costs, engineers have had to constantly increase the standard transmission voltages in order to decrease the size of conductor, and bring costs within the economic limit. It is thus seen that conductor cost is a serious item in any transmission line estimate.

Whereas the conductor cost is only a small percentage of the total cost of a hydro-electric scheme where the greater outlay is on civil engineering works and plant, it is a ruling factor on transmission lines and, to a lesser extent, distribution systems where a large expenditure is usually incurred in transformers, supports, meters and substations.

The percentage of conductor cost to the total cost of a line varies according to the design and the function of the line.

In the case of the Pykara Scheme, the percentage varies from 10.8 per cent. for the small lines to 22.3 per cent. for the more important lines, with an average of 17.3 per cent. Any appreciable increase in these preparations might render extensions into rural areas unprofitable and retard development.

The power rates, for a community fed by a line on which a duty of 15 per cent. had been paid on the conductors, would have to be increased by about 20 per cent.  $\times$  15 per cent. or 3 per cent. plus the extra required on the distribution system, which may be taken roughly at 10 per cent.  $\times$  15 per cent. or 1.5 per cent., making a 4.5 per cent. total increase in the power rates.

To this should be added the effect of any other duties which may be contemplated on steel poles or towers, meters, insulated wire, and electrical equipment in general.

Referring again to distribution systems, the percentage cost of the conductor to the total investment varies widely, but may be taken as approximating 10 per cent. for small overhead systems, excluding generating plant, and a very much higher percentage for an underground system.

Taking the Pykara Scheme as a whole and including the distribution systems now contemplated, the total cost of line conductors c.i.f. will be about Rs. 8,50,000. The additional cost to Government will thus be Rs. 85,000 or Rs. 1,27,500 according as to whether a 10 per cent. or 15 per cent. tariff is levied.

This Department does not use any underground cable in appreciable quantities.

Statements A and B are attached showing the cost of various sizes of line conductors purchased for the Pykara Scheme and the percentages of the cost to the total investment in the line. Prices are also given for certain other wires and cables purchased recently, either locally or through the India Store Department, London.

In passing, it might be mentioned that if the tariff on copper wire or cables rendered their use uneconomical, then aluminium or copper clad steel cables would be used, unless a tariff was also placed upon them. There are also other conductors being marketed under various names, which have an aluminium or cadmium base.

To date, this Department has not purchased any wires and cables from the Indian Cable Co. as practically all the conductors used have been of Aluminium Steel Reinforced.

Recently, however, the Company referred to above, have started to manufacture this type of conductor which, if up to standard specifications, will certainly be used by this Department in future, provided that the cost is not too high.

## STATEMENT A.

## Conductor Costs.

Item No.	Description.	Quantity of conductor. Miles.	Rate c.i.f. Indian Port.	Cost of conductors c.i.f.	Cost of transmission lines or distribution systems.	Conductor cost as a per cent. of cost of transmission lines or distribution systems.	Probable date of landing in India.
1	2	3	4	5	6	7	8
	<i>Pykara Hydro-Electric Scheme.</i>	Miles.	Rs.	Rs.	Rs.	Per cent.	
1	Pykara-Coimbatore 66/110 K. V. line. 6/208 plus 7/069 A. C. S. R.	310	1,072	3,32,320	15,85,210	21.0	May to June 1931.
2	Coimbatore-Erode 22/68 K. V. line. 7/144 A. C. S. R.	360	460	1,65,600	7,38,392	22.3	End of 1931 or early 1932.
3	Coimbatore-Pollachi 22 K. V. line. 7/102 A. C. S. R.	165	280	46,200	2,60,000	17.8	Early 1932
4	Pollachi-Anamalais (Iyerpadi) 22 K. V. line. 7/102 A. C. S. R.	68	280	19,040	1,76,500	10.8	Do.
	Total cost of Pykara Scheme.			5,63,160	27,60,102	20.2	(Average per cent.)
		..	..	..	1,30,90,940	..	
	Cost of transmission lines as per cent. of total cost of the scheme.	..	..	..	21.2 Per cent.	..	
	<i>Erode-Salem Power Supply Scheme.</i>						
5	Metur-Erode-Salem 22 K. V. Lines. 7/118 A. C. S. R.	223	351	78,300	3,60,000	21.8	Already arrived in India.
	Total Cost of Schemes	..	..	..	4,58,000	..	
	Cost of transmission lines as per cent. of the total cost of scheme.	..	..	..	78 per cent.	..	
	<i>Government Distribution Schemes.</i>						
6	Coimbatore Government Distribution—						
	7/186 A. C. S. R.	42	960	40,320	2,70,000	20.3	1932.
	7/0935 A. C. S. R.	61.5	240	14,760			
7.	Anamalais Government Distribution. 7/0985 A. C. S. R.	36	240	8,640	68,000	12.7	

## STATEMENT B.

I. *Insulated Copper Cable.*

7/·064 single core V. I. R. L. C. and braided, 600 volts . . . . .	Rs. 870 per 1,000 yards c.i.f.
7/·064 steel tape, armoured . . . . .	Rs. 1,600 per 1,000 yards c.i.f.

The above prices were obtained on the phone from Henleys Department at Crompton's.

The following is additional information regarding 7/·064 cables ordered for Glen Morgan 3rd Unit:—

80 yards, 7/·064 single core E. H. T. varnished, cambric insulated, L. C., taped, jute braided, compounded cable, 11,000 volts . . . . .	£20-10 f.o.b., i.e., Rs. 3-4 per yard.
20 yards, 7/·064 single core cambric insulated triple braided, fire and weather proof cable, 660 volts . . . . .	£2,17 f.o.b., i.e., Rs. 1-9 per yard.
20 yards, 7/·064 3-core L. T. Var- nished, cambric insulated and other- wise as above . . . . .	£5-17 f.o.b., i.e., Rs. 3-9 per yard.
Price of bare copper wire No. 2/0 to No. 10 S. W. G. . . . .	As. 6 f.o.r. Madras..

The same may be assumed as c. i. f. price.

With regard to materials imported recently, the following bare copper conductors were ordered in 1930 (Indent No. 72 on the Director-General, India Store Department, London):—

		Rs. c. i. f.
36,000 feet	} No. 8 S. W. G. Cu. at 7·2 annas	1,285
2,850 lbs.		
26,000 feet	} No. 6 S. W. G. Cu. at 7·2 annas	1,305
2,900 lbs.		
600 feet	} No. 9 S. W. G. Cu. at 7·2 annas	16
36 lbs.		
	Total	<u>2,606</u>

*Statement of cables purchased for Glen Morgan Project.*

## GLEN MORGAN OCTACAMUND LINE.

	Rs.
7/·102, Aluminum, steel-cored Wire, 70 miles . . . . .	21,920
Railway freight . . . . .	877
Landing charges . . . . .	97
Local Transport . . . . .	1,903

## POWER HOUSE.

91/103, L. T. Varnished, cambric insulated, lead covered, taped and braided, fire proof cable, 660 volts, 220 yards c.i.f. . . . .	2,390
Landing charges . . . . .	16
Railway freight . . . . .	104
Local Transport . . . . .	29



	Rs.
7/029, L. T. Varnished, cambric insulated, lead covered taped and braided, fire proof cable, 660 volts 55 yards c.i.f. . . . .	340
Railway freight . . . . .	8
Local transport . . . . .	4
19/072, Single conductor, varnished, cambric insulated, triple braided, F. & W. R. compounded cable, 66 volts, 175 yards c.i.f. . . . .	399
Landing charges . . . . .	1
Railway freight . . . . .	10
Local transport . . . . .	3
7/064, Single conductor, varnished cambric insulated, triple braided, F. & W. R. compounded cable, 66 volts, 35 yards c.i.f. . . . .	83
Railway freight . . . . .	1
7/029, Single conductor, varnished, cambric insulated triple braided, F. & W. R. compounded cable, 66 volts, twin core, 50 yards c.i.f. . . . .	58
Railway freight . . . . .	1
Local transport . . . . .	½
7/029, Single conductor, varnished, cambric insulated, triple braided, F. & W. R. compounded cable, 66 volts, 3-core, 30 yards c.i.f. . . . .	85
Railway freight . . . . .	2
7/029, Single conductor, varnished, cambric insulated, F. & W. R. compounded cable, 660 volts, 4-core, 80 yards c.i.f. . . . .	203
Railway freight . . . . .	4
7/064, H. T. Cable, 11,000 volts, 250 yards c.i.f. . . . .	1,018
Railway freight . . . . .	43
Local transport . . . . .	11
7/064, 3-core, special F. & W. R. compounded cable, 660 volts, H. T. cable, 55 yards c.i.f. . . . .	218
Railway freight . . . . .	4
7/064, 3-core, special F. & W. R. compounded cable, twin- core, 660 volts, 40 yards c.i.f. . . . .	157
Railway freight . . . . .	3
7/064, 3-core, special, F. & W. R. compounded cable, Triple braided, 660 volts, 20 yards c.i.f. . . . .	52
Railway freight . . . . .	2
37/064, Vienna braided cable, 85 yards c.i.f. . . . .	208
Railway freight . . . . .	15
Local transport . . . . .	2
COONOR TEA ESTATE LINES.	
8, S. W. G. copper wire, 8,454 lbs. c.i.f. . . . .	5,090
Landing charges . . . . .	33
Railway freight . . . . .	277
Local transport . . . . .	64
LOCAL LINES.	
10, S. W. G. copper wire, 510 lbs. . . . .	385*
6, S. W. G. copper wire, 1,424 lbs. . . . .	921*

\* Purchased locally from the Ootacamund Municipality.

**Government of United Provinces.**

*Letter No. 375-I, dated the 6th August, 1931.*

With reference to your letter No. 318/C.-10, dated the 1st June, 1931, I am directed to say that this Government asked the following Departments and officers to supply, if available, the statistical information required by the Board, and to express their views on the merits of the application for protection. As the Board had asked for a reply by 4th July, a copy each of the replies of these Departments and officers is enclosed herewith. The views of this Government on the merits of the application will follow:—

- (1) Public Works Department, Irrigation Branch, in charge of Hydro-Electric schemes.
- (2) Public Works Department, Buildings and Roads (Electric Inspector to Government).
- (3) Municipal Department (Superintending Engineer, Public Health Department).
- (4) Director of Industries (Stores Purchase Officer).

Enclosure No. 1.

*(Irrigation Branch.)*

An increase of 10 per cent. protective duty on bare copper conductors would increase the cost of High Tension lines by approximately Rs. 200 per mile, or about 3 per cent. This figure is based on the present price of copper conductor at Rs. 845 per ton. Assuming therefore that copper conductors had been used throughout the Grid instead of Aluminium the extra cost of the above duty would have increased the cost of the lines by approximately Rs. 2,40,000.

In the case of Low Tension Distribution the approximate increase in cost for construction in accordance with that carried out by Messrs. Martins in the districts of the Upper Ganges and Upper Jumna areas, assuming that copper had been used instead of Aluminium would have amounted to approximately Rs. 400 per mile, or approximately 5 per cent. The total compulsory mileage installed by Messrs. Martins in accordance with their agreement amounts to 110 miles, the extra cost would therefore have been  $110 \times 400 = 44,000$ .

An increase in the duty on insulated wires would not appreciably have affected the cost of the Hydro-Electric Scheme or Messrs. Martin's distribution, as very little of this type of wire has been used. In the case of the Grid Scheme the expenditure on lines is approximately 55 per cent. of the total cost, an increase therefore on account of the enhanced duty of 10 per cent. would only amount to just over  $2\frac{1}{2}$  per cent. on the whole scheme and it is doubtful whether it would have been necessary to increase the rates of bulk supply on this account.

In the case, however, of Low Tension Distribution an increase in duty might give licensees an excuse for raising the charges.

An increase of duty on insulated wires will however affect the consumer as it will increase the expenditure on wiring buildings and will retard the general development of consumption of energy specially by the small consumers.

At the present time there is a protective duty on imported V. I. R. wires up to a certain size. The Indian Cable Co. manufacture their insulated wire by C. M. A. standard which is the standard adopted by the leading cable makers in England. The effect of the present duty has been to increase the importation of cheap cables not manufactured up to any standard. In spite of the present protective duty it is still possible for

V. I. R. wire up to C. M. A. standard to be imported and to compete with similar material manufactured by the Indian Cable Co., but large quantities of inferior cable which is dangerous both from the point of view of life and fire are imported and not being manufactured to any standard enters into severe competition with the higher grade wires. The addition of further protective duties will not stop the importation of such wire which will possibly be manufactured to an even lower standard than at present in order to compete with the wires manufactured by the Indian Cable Co. The effect will be a large increase in the use of this cable by small wiring contractors resulting in inefficient and dangerous installations on consumers' premises. It would appear that the prohibition of the import of V. I. R. below a certain standard would be preferable to an increase in the duty of such wire and would remove the competition from the cheap grade of wire now imported which the proposed increase in duty will not do.

As regards para. 3 of the letter from the Tariff Board, I regret it is not possible to supply the information asked for, as the amount of copper used in the Grid lines has been very small and in the case of lines constructed with copper conductor an inclusive figure was given by the contractors in their tender.

As regards para. 4 of the above letter, approximately 180 miles of bare copper conductor have been purchased by this department from the Indian Cable Co. The quality of this conductor compares favourably with that manufactured abroad.

As regards insulated wires only small quantities have been purchased through the Indian Stores Department, such wire being quite satisfactory.

(Sd.) K. C. B. WALTON,  
Executive Engineer.

8th July 1931.

Enclosure No. 2.

*Copy of a letter No. 4582/E. L., dated the 30th June, 1931, from the Superintending Engineer, Public Health Department, United Provinces to the Secretary to Government, United Provinces, Municipal Department.*

#### PROTECTION DUTY ON ELECTRICAL CONDUCTORS.

Reference your endorsement No. 4044-C./XI-160, dated the 25th instant and Enclosure No. 318/C-10, dated the 1st June, 1930, from the Tariff Board, I have the honour to inform you that if a protective duty is imposed on electrical conductors over 1/80th square inch in sectional area, all the copper involved in municipal works will be affected.

The great bulk of the work done for local authorities is in bare copper, insulated cables only being used for the leads connecting up motors and generators to switch boards in very short lengths.

Reference para. 3 of the Tariff Board's letter, I regret there is not sufficient time for me to collect the necessary information before the 4th of July. All the work carried out by this department is done by contract on the lump sum-cum-item rate system inclusive of a period of maintenance and allows for completed work, that is to say manufacturing, delivery, erection, testing and maintenance, so that the c.i.f. and other charges would take some time to discover.

Reference para. 4—no purchase of cable or copper wire has ever been made by this department from the Indian Cable Co., Ltd., Calcutta, so that I am unable to state how their manufactures compare with imported articles. I would state for your information however that only the cables and bare copper wires which comply with the British Standard in all respects are suitable for works carried out by this department on behalf of local authorities.

ELEC. WIRES

H

It would perhaps be of interest to the Tariff Board to know that the cost of the copper required for the distribution in the average town in these provinces would vary from 10 to 15 per cent. of the total cost of the system. The capital charges of such a system, estimating sinking fund and interest  $6\frac{1}{2}$  per cent. per annum compound interest on a 20-year loan, might easily amount to 70 per cent. of the total annual charges of the supply, so that a protective duty of 10 to 15 per cent. would result in increasing the annual charges of the supply from 7 to  $10\frac{1}{2}$  per cent., i.e., the price per unit would have to be increased in something like this ratio.

I give it as my opinion that the present is a most inopportune time to levy any protective duty on materials of this description which are extensively used in the public service, as it results in the benefit of a few at the expense of the great bulk of tax-payers, and it cannot but have a retarding effect on trade with other countries on which the prosperity of the country mainly depends.

Enclosure No. 3.

*Copy of letter No. C./415/M.-3, dated the 26th June 1931, from J. C. Donaldson, Esq., M.C., I.C.S., M.L.C., Director of Industries, United Provinces, to the Secretary to Government, United Provinces, Industries Department, Allahabad.*

**PROTECTION TO THE MANUFACTURE OF ELECTRIC WIRES AND CABLES.**

With reference to Government endorsement No. 306-I./XVIII-478, dated the 20th June, 1931, I have the honour to state that up to the present the Irrigation Branch had purchased direct all electric conductors required for their hydro-electric projects and there is no information available in my office about these purchases, nor has the Stores Purchase Officer made a purchase of conductors for any Municipal Electric Supply Scheme. I understand that the letter from the Secretary, Tariff Board, has also been referred to the Irrigation Branch and to the Electrical Inspector. The time given for a reply is very short and it therefore seems unnecessary for me to attempt to collect information from these officers who will be supplying it to you direct. The Stores Purchase Officer is, on general grounds, in favour of protection being given to this and similar industries. I have no information what the possible output of the Indian Cable Co. is and whether it can meet all or a large proportion of the demand, nor what the effect on the consumer is likely to be. I therefore prefer to express no opinion myself at this stage. I should be much obliged if copies of the opinions received from the Irrigation Branch and the Electrical Inspector and of the Government's reply to the Secretary of the Tariff Board could be sent to me for information and record in my office.

Enclosure No. 4.

*Memorandum.*

The United Provinces has completed all the Hydro-Electric and Municipal Electric Supply Schemes that are ever likely to be done and therefore no figures regarding the probable increase in capital expenditure on schemes in progress or to be taken up can be given.

The Hydro-Electric Division of the Irrigation Branch might be able to give figures for para. 3 of the Tariff Board's letter, but their work was done by contractors who are also manufacturers and the materials used was imported direct by them.

This Government does not purchase directly any electric material. All works are given out on contract and the specifications call for cables and wires to the Cable Makers Association Specifications. As the Indian Cable Co., Ltd., make bare copper and insulated wires to these specifications,

contractors are not debarred from putting forward materials manufactured by the Company.

I am of opinion that the bare copper and insulated wire manufactured by the Indian Cable Co. do not compare unfavourably with the same material manufactured in England and that they are superior to the material manufactured in Japan and on the Continent. In my opinion, the Indian Cable Co. require no protection from British material, what they do need, however, is protection from the "cheap junk" masquerading as electric insulated wires that is imported into India from Japan and the Continent. Made to no specification, having no life or insulation worth talking about, and manufactured by sweated labour, it is designed entirely for cheapness and naturally is used by the Bazar Mistri to the exclusion of anything else.

(Sd.) A. C. WARREN,

*Electrical Inspector to Government.*

25th June, 1931.

**CHIEF ENGINEER, HYDRO-ELECTRIC DEVELOPMENT, MADRAS.**

B.—ORAL.

**Evidence of Major H. G. HOWARD, M. C., recorded at Ootacamund, on Wednesday, the 23rd September, 1931.**

*President.*—Major Howard, you are the Chief Engineer, Hydro-Electric Development, Madras?

*Major Howard.*—Yes.

*President.*—I take it from the papers that you have sent in that you are on the whole opposed to the grant of protection?

*Major Howard.*—Let us say opposed to a certain extent on selfish grounds in my own department's interest.

*President.*—You are opposed chiefly on the ground that an enhanced duty on conductors and cables would mean a very considerable increase in the cost of electric supply schemes and so on?

*Major Howard.*—I would not say considerable increase; it would be a marked increase, particularly if it is a 15 per cent. tariff.

*President.*—At 15 per cent. you think there might be an increase in capital expenditure which might to some extent hamper electric development?

*Major Howard.*—It would certainly handicap certain projects. What we have to do now is, once we have a scheme properly operating you might say all our business of development would consist of extension of lines into undeveloped territory and the margin is so small on such ventures that we have figuratively speaking to save annas and therefore a 15 per cent. increase in the cost of conductors, which as you see in such schemes is about 78 per cent. of the cost of the scheme, makes quite a difference.

*President.*—Let me put the position in this way: taking the hydro-electric development here at the stage which it has reached, if an increase of 15 per cent. in the duty on conductors is levied, then the real difficulty would be that you would find it difficult to carry out extensions on the estimates of capital expenditure which have been made till now.

*Major Howard.*—Obviously they would have to be modified.

*President.*—And the primary difficulty therefore would be finding the increased capital required?

*Major Howard.*—Not exactly. As I said before, all these extensions if they are not productive then we cannot get sanction for expenditure on the scheme. What I mean to say is this. It is perfectly feasible to suppose that there are certain schemes which are now approved with a very small margin of profit. If you add 15 per cent. to, say, 75 per cent. of the expenditure then the scheme would be definitely thrown on to the unproductive category and the whole project would be side tracked.

*President.*—That is to say, if on that basis you wanted to keep the work productive then the rates charged to your consumers would have to be slightly raised?

*Major Howard.*—No. That is what you might call true retrenchment because the whole thing will fall to the ground. You get no revenue; you will get no sales.

*President.*—You would say the increase would be such as to necessitate an increase of the rates charged to such an extent that the consumer would drop consuming?

*Major Howard.*—Not all, but we should certainly lose a certain number of consumers that way. Another thing you have got to remember is that in the first two or three years there are certain classes of consumers who would take power at almost uneconomical rates. But after the period of saturation has been reached then we have got to give very economical rates and the question of 6 pies per unit would make a lot of difference.

*President.*—That I think is probably the correct point of view. That is to say, if you are not able to reduce the rate then the possibility of extending the range of consumption would be limited.

*Major Howard.*—It would be hampered.

*President.*—In your letter, a copy of which the Madras Government sent us, you estimate the increased cost which would be incurred on account of the duty in connection with the Hydro-Electric Scheme in regard to the transmission systems and the distribution systems. Am I right in thinking that for practical purposes we might regard the hydro-electric scheme and the transmission scheme together?

*Major Howard.*—Yes, certainly.

*President.*—The distribution scheme is a different proposition?

*Major Howard.*—I think it would be safer to consider that as separate.

*President.*—According to your statement the increase in the capital expenditure on hydro-electric schemes would be relatively less because a very considerable part of the capital expenditure is incurred in connection with civil engineering works and conductors form a small proportion. But with regard to distribution schemes the position is different: there the cost of conductors is relatively high and it is the distribution scheme that matters to the consumer.

*Major Howard.*—Exactly.

*President.*—So that we should be justified in considering the effect of the duty on electric schemes primarily with reference to their effect on distribution schemes?

*Major Howard.*—That is exactly right. In other words if you put a 15 per cent. duty on the Pykara Hydro-Electric Scheme, as sanctioned by the Secretary of State it is practically generation in bulk and we would not look at it if it is going to cost a few lakhs more, nor is it going to make any material difference to the wholesale cost. But as you aptly expressed it, when you come to distributing power and selling it, it makes a vast difference.

*President.*—You have given us two distribution schemes with reference to your project.

*Major Howard.*—Yes because they are actuals. You can see from these two examples how distribution schemes vary.

*President.*—The two distribution schemes are Nos. 6 and 7 in your Statement A—the Coimbatore and the Annamalai Schemes. There so to speak the distributing licensee is the Government itself.

*Major Howard.*—Yes.

*President.*—According to your statements the cost of conductors in the Coimbatore Scheme amounts to Rs. 55,080?

*Major Howard.*—Yes.

*President.*—Assume we propose a duty of 15 per cent. on conductors then 15 per cent. on that is Rs. 8,262?

*Major Howard.*—Yes.

*President.*—That therefore is the additional capital expenditure that would be required?

*Major Howard.*—Yes.

*President.*—Let us assume that this additional capital expenditure must earn a reasonable revenue. There are two kinds of revenue that it must

earn: it must earn depreciation and it must also earn interest. Supposing we take approximately a figure of 15 per cent. to cover both interest and depreciation, that would be a fair rate?

*Major Howard.*—Yes.

*President.*—Let us take 15 per cent. of 8,262 as the increased revenue that you must earn to cover interest and depreciation. 15 per cent. of 8,262 is Rs. 1,239. So far the position is clear from your figures. What do you estimate to be the total number of units for distribution?

*Major Howard.*—I can't tell you now because it is entirely a new scheme. You must remember too that it is a high tension distribution: I mean the cost to the consumer does not stop here. This is the cost to the licensee or the wholesalers. In the cost to the actual consumer you have got to include a low tension distribution scheme.

*President.*—Who is going to be the ultimate distributing licensee in the Coimbatore Scheme?

*Major Howard.*—One of our customers will be the various municipalities. We sell this power at a very very low rate. Roughly speaking you might say on an average 25 per cent. of what we sell has to go through transformers: there is a loss there. Then you have the low tension distribution system where the copper is very much heavier.

*President.*—Supposing a municipality started distributing electricity supplied by you on this scheme, what is the proposal at present? At what rate do you supply electricity to the distributing licensee?

*Major Howard.*—It depends entirely on the characteristic of the load. Roughly speaking Coimbatore will receive it at about an anna. That will be the average.

*President.*—And I suppose under the present contract they can charge any rate up to 8 annas?

*Major Howard.*—No, they can't.

*President.*—What is the maximum rate?

*Major Howard.*—You mean the maximum rate laid down by us? It is 5 annas for light alone and 4 annas for lighting and fans. There would not probably be a single consumer for light alone and it goes down in some cases to below cost for certain power. In other words it may sound strange, but they have actually to sell power to certain classes of consumers at a lower rate than the rate at which they get the power from us.

*President.*—Those are industrial concerns?

*Major Howard.*—Yes. Tariff is based frankly on what we can get. All these elaborate cost theories are merely guides and you cannot put them into practice.

*President.*—As far as the Coimbatore scheme is concerned, is there a very large number of industrial consumers in that area except the cotton mills?

*Major Howard.*—Not from our point of view. I think I can give you an idea. I think in the Coimbatore Municipal distribution scheme there will be altogether 600 to 700.

*President.*—Supposing we took an average of four annas a unit, would that be somewhere about right?

*Major Howard.*—I should say the average income will be, to begin with, very roughly 2 annas which will gradually decrease as they sell more and finally what they will pay is round about  $\frac{1}{4}$ th of an anna and the average income would be  $1\frac{1}{2}$  annas. The margin is very small. We are managing these Municipalities and our policy is to limit the profits that they can make. Any profits above a certain amount goes back to the consumer in the form of reduced rates.

*President.*—As far as you are concerned, you are going to supply electricity to the licensee at about one anna.



*Major Howard.*—Roughly.

*President.*—Let us see what the effect of this would be on the rate at which you would be in a position to supply electricity to the licensee.

*Major Howard.*—Yes.

*President.*—We have got now this figure of Rs. 1,239 as the additional revenue that you have got to get if the duty is levied.

*Major Howard.*—Yes.

*President.*—Can you tell me approximately—quite a rough figure for guidance—what is the amount of electricity that you might normally expect to supply?

*Major Howard.*—On this investment?

*President.*—On this Coimbatore scheme how much electricity do you think is likely to be taken?

*Major Howard.*—If I answer that question, I have got to increase this considerably. This investment here corresponds to a certain very rough figure.

*President.*—You are not committing yourself to anything. Give me that rough figure.

*Major Howard.*—You want them in units?

*President.*—Yes.

*Major Howard.*—We can possibly sell about 1½ million units a year there eventually but not to begin with.

*President.*—To begin with how much do you expect to sell?

*Major Howard.*—About a third of that.

*President.*—Make it a fourth.

*Major Howard.*—Yes.

*President.*—I take it in the first stages you would have to supply about 250,000 units.

*Major Howard.*—Yes, on that investment.

*President.*—Rs. 1,239 on 250,000 units will cost you one pie more. I didn't expect it would amount to so much as that.

*Major Howard.*—As I said before you have got to take all the little calculations into account. You must remember that they are cumulative. This is only one part. When you really get down to your average for your whole system, it does mount up.

*President.*—This is simply taking the distribution system.

*Major Howard.*—High tension consumer and not the low. In the case of the high tension consumer we only get a margin of 5/100th of an anna per unit. I eventually made an agreement with one client where our margin was only 5/100th of an anna on everything that we sold. That is what we have got to do. These schemes won't pay at first. As you know, we have got to go through 5 to 7 years of unprofitable period and it is only when we can generate and sell in huge quantities as they do everywhere else that we can approach other people's or other countries' figures. What does one pie mean on the whole system? It is considerably more than one pie. If you take one pie on 50 millions which is the maximum we can turn out on this plant, it amounts to something.

*President.*—The position as it was put to us by the Electric Supply Corporations in northern India whom we examined was that the effect of the duty of 15 per cent. on bare conductors would not mean such an increase in their capital expenditure as to justify a rise in the rates charged to consumers, but they were very strong in maintaining that an increase in capital expenditure would make it difficult for them hereafter to reduce their price to the consumer which they are anxious to do in order to extend the supply to the consumers. They put their objection mainly on that ground.

*Major Howard.*—That, as you know, is also my objection. At the same time, as we discussed before, distribution systems do vary in characteristics so much that we can hardly generalise and again, our percentage of capital cost on conductors in distribution systems is very much higher than the particular supply Companies you are referring to.

*President.*—In what way do you mean?

*Major Howard.*—On our distribution schemes we have no generating station to take into account. I should say you could generalise to this extent. What I have given you are almost extreme cases. Obviously the percentage of conductor cost would be lower on a self-contained distribution scheme having its own plant. The duty would have very much less effect on such a scheme, than it does on ours.

*President.*—We had 3 or 4 cases in which Supply Corporations gave us figures where they do their generation besides distribution and there the increase in the cost to the consumer which the duty might entail is not more than say about .03 of an anna.

*Major Howard.*—Yes. Again, as you have pointed out in wholesale supply, in bulk, .03 of an anna is a very big thing. In the case of light or power it is negligible.

*President.*—This Coimbatore scheme that you have given is interesting as an extreme case of what might happen under an increased duty in the case of a wholesale supplier, is not that so?

*Major Howard.*—Exactly.

*President.*—I think the position that we might reasonably take up is this that there are cases where the rates charged to consumers may possibly have to be raised slightly as the result of an increased duty, but in the great majority of cases it is certain that the reduction in the cost of electricity which is so important would be made more difficult and there is a third consideration that where electric schemes such as yours are in progress, that is to say construction in progress, then an increase in capital expenditure might to a very considerable extent hamper them because of the need for finding either more capital or carrying out existing works with more difficult economies, so that from all these three points of view, it might be urged that there is a fairly strong case against increasing the duty on conductors. But now your case is based entirely on bare conductors.

*Major Howard.*—Absolutely.

*President.*—You are not concerned with insulated cables.

*Major Howard.*—For the moment, no.

*President.*—All these Electric Supply Corporations have schemes like yours. They are only concerned with this.

*Major Howard.*—Exactly.

*President.*—Your transmissions are all overhead?

*Major Howard.*—Yes with a few isolated exceptions which don't count.

*President.*—Where are those isolated exceptions?

*Major Howard.*—For instance railroads. We often cross with cable, for the voltage is not high. We have also cable connections from many distributing transformers to overhead mains.

*President.*—What kind of cables do you use for this underground?

*Major Howard.*—Various kinds. Usually what I advocate for certain voltage is varnished cambric.

*President.*—You have not used paper cables?

*Major Howard.*—Yes for low voltage. For all our generating plant we use varnished cambric which could not possibly be made out here for many years, because there is not sufficient demand.

*President.*—They don't propose to do it either. There is one other point on which I should like to have some information. What is the system on

which you purchase your conductors? Do you get all your supplies from the Director-General of Stores?

*Major Howard.*—Not necessarily.

*President.*—Do you make direct purchases?

*Major Howard.*—For instance in the case of this large scheme which was sanctioned by Government, our method was rather unusual owing to an old agreement which you have probably heard about. We had to make purchases in London through a certain firm. There was no help for that. Ordinarily if I want to build a line, for instance we are going to build a line from Anamalai to Pollachi, that contract is going to be placed in the country and will go to the lowest bidder and as long as each component part of the work comes up to our specifications, we don't specify where they should be bought. We can't help it if the cables come from Germany or England or anywhere else, but the contract will be placed in India.

*President.*—The point that really interests me is not the source from which you purchase but the basis on which the price is fixed in the contract. That is what I want to get at. That is to say when you buy conductors, take for example any recent purchase that you have made, in the first place what is the interval generally between the placing of the order and the time when the delivery is made.

*Major Howard.*—I don't follow.

*President.*—Supposing you want to purchase a fairly considerable quantity of bare conductors, taking your recent experience, what is usually the interval between the time the order is placed and the time delivery is made?

*Major Howard.*—In our recent experience very quick indeed.

*President.*—Approximately what time?

*Major Howard.*—I have known cases of a small order, because we have not placed big orders for cables, getting out here within 9 or 10 weeks from home.

*President.*—That is quick delivery?—

*Major Howard.*—I cannot answer that question, because I have not placed any big order. They told me at home last year that they had such big stocks that they could deliver from stock any standard size.

*President.*—I will tell you precisely what I am trying to get at. At present the market for electrolytic copper is a falling market. I understand from some of the papers that I have seen that the practice is to base the price of electrolytic copper rod on the ruling price of copper. Supposing, for example, I place a contract to-day for, say, 500 tons and delivery is to be made, let us say in January, then the price at which I should expect under my contract to get the black rod will depend on the price of electrolytic wire bar in January when delivery is made.

*Major Howard.*—Yes.

*President.*—I want to know whether that is the practice on which from your experience, orders for conductors are placed.

*Major Howard.*—No. We absolutely don't take into account any possible rise or fall in the copper market once an order is placed. That has been my experience not here in India, but just before I came out, we had to pay 20 per cent. more, or some figure like that for copper when received—this was in Chile—than the ruling price, because the delivery extended over six months and prices were falling. I think that is the case here. The only instance where there might be any cover or difference would be on special contracts. Generally a price is specified when the order is placed and the price of copper when the order is delivered, unless otherwise specified, does not enter into the contract price.

*President.*—How long ago did this Chile transaction take place?

*Major Howard.*—In 1925.

*President.*—The copper market was not behaving then in the way in which it has been behaving during the last 18 months. I noticed from some of the contracts placed by the Government of India that prices are based upon the ruling prices of the electrolytic copper bar. When you have a market which is falling at this rapid rate that seems to be a necessary safeguard.

*Major Howard.*—I have no doubt that people would not accept it. You take the case of a big firm in England or America where they have in stock copper bought previously to satisfy the current demand. If they get your order and take 4 months to complete it, they are using for that order copper which was purchased at a price even higher than you are paying, and they are certainly not going to agree to a lower price 4 or 5 months hence.

*President.*—They cannot absolutely adhere to that practice, because when you have the raw material for an industry rapidly falling, the price of the raw material must certainly affect current prices.

*Major Howard.*—The only thing I can say is this. Unless it is a firm which doesn't do very much business and they can buy copper as soon as they receive your order, refine it and draw it, the idea is certainly not tenable. No businessman will accept it.

*President.*—When there is a fall in raw cotton, there is an immediate reaction on the price of the finished product.

*Major Howard.*—True.

*President.*—Why should not that apply to copper?

*Major Howard.*—We are talking about contract rates. I suppose if you go and place a big order for cotton goods to-day for delivery six months hence, certainly you have got to stick to the price you have agreed to. Unless you put in a cover or something like that, they won't agree to sell at a lower price.

*President.*—Let us put it this way. As far as large contracts are concerned, probably the application of that principle is limited but then with regard to purchases in the open market the position would be different.

*Major Howard.*—Yes, to a certain extent it would be, but it would not go down . . . .

*President.*—Not to the same extent I agree.

*Major Howard.*—Because manufacturers have got to protect themselves. There is a limit to that. Certain manufacturers may be anxious to get ready cash and they will probably flood the market with copper.

*President.*—Take your own case as a purchaser. Don't you think that when the market is behaving as it does now you should provide for sufficient cover?

*Major Howard.*—Obviously. If I were a manufacturer, as I said before, I would not take it. I don't think that any manufacturer would.

*President.*—When there is so much over-production, the extent to which the manufacturer can stick to his terms in that respect must be very limited. The copper market is in a very depressed condition now.

*Major Howard.*—Exactly; so are the other markets.

*President.*—I think that the fall in the price of copper is considerably more than the fall in the general level of prices, that is to say the fall in the price of copper has to be accounted for not merely by monetary causes but by other causes relating entirely to copper. For instance, Rhodesian mines and things like that have a good deal to do with it. It is not due purely to monetary causes. When you have the copper market in such a depressed condition, the extent to which the manufacturer can dictate his terms seems to me to be very limited.

*Major Howard.*—I don't agree with you, but I would recommend that you talk this over with some responsible manufacturer who is fabricating copper. Economically your ideas are all right in theory, but I think that

it would be difficult for you to put them into practice. There is a very great difference between dumping and making a contract for forward delivery, where the manufacturer has to start immediately he receives the order and manufacture the goods. If he is a retailer or what you call a commission agent, he is likely to say to himself. "Here is one who wants 200,000 tons of copper cable. I have got the world market to draw on, I know of people absolutely overstocked. I will take a chance on that". Then he will go to you and say "I will take the order for 200,000 tons of copper cable and deliver the goods to you after four months at say 10 per cent. below the price prevailing now". That man gambles on a falling market. It may be 10 per cent. below or it may be 10 per cent. more. He either stands to gain or lose.

*President.*—If I want to buy say 500 tons of conductors, can I get it to-day? Can I go to the open market and ask for it or shall I have to fix a time?

*Major Howard.*—You can get a firm quotation to-day.

*President.*—There would be enough stocks in the market for me to get a quantity like 500 tons without any previous contract?

*Major Howard.*—I should say, yes, because the firm that would get the contract, if they have not got enough, would immediately go to their friends who would make up the difference. After all, 500 tons is not such a big quantity.

*President.*—I don't think that there is any other point that I want to raise.

*Major Howard.*—There is one thing which I want to say. You talk about these little Supply Companies which have been analysed and so forth. You have got to remember that most of them are going to be back numbers in the future. Most of them are badly managed and uneconomically run. When it comes to generation, you have to look to the future and take only into consideration such schemes as the Punjab, our own Pykara, Tata's and Stamp's in the United Provinces *plus* others which are bound to go forward. We are the only people who are going to produce in future if you leave out Calcutta.

*President.*—These small supply companies which generate their own electricity are uneconomical propositions?

*Major Howard.*—Absolutely. They are only a few hundred k.w.s. One must not mention names. You can take some pretty big towns of Northern India having 200,000 inhabitants. You compare the cost of generating power for their local supply schemes with any other country in the world that is more or less economically situated like India. You will find that there is a very unfavourable comparison.

*President.*—We have come across that kind of comparison.

*Major Howard.*—I don't think that you should pay quite so much importance to it. Think of the people who are really producing power—the big supply schemes—and recognise their effort to give cheap electricity to the country.

*President.*—The point is that we ought to look at the question in relation to electric supply corporations that take their electricity from hydro-electric schemes.

*Major Howard.*—Do it in another way. Look at these enterprises that are producing the greatest amount of electricity and endeavouring to give it to the populace at a low rate.

*President.*—What is at present the lowest rate at which electricity is sold?

*Major Howard.*—I am offering it to some of the millowners down there at roughly speaking less than 6 anna.

*President.*—Say about 7 pies.

*Major Howard.*—Yes, 7·5 pies.

*President.*—What is the lowest rate in India for industrial purposes?

*Major Howard.*—As far as I know this is the lowest.

*President.*—The Sivasamudram rate is I think 4 pies.

*Major Howard.*—The biggest contract that the Sivasamudram people have got as far as I know is the Bangalore Woollen Mills. With them in a moment of generosity they made a contract for half an anna and to the best of my knowledge for three years they have been trying to raise that to 6 anna.

*President.*—What is the rate in Bombay charged by Tata's?

*Major Howard.*—It depends on the characteristic of the load. I can tell you this much. Our rates are based first of all on actual local costs which we have got here, secondly on Bombay rates because we want to attract mill-owners if we can and thirdly on what we think we can get. Our rates are slightly under the Bombay rates. We have deliberately done that in spite of the fact that we are better situated because fuel oil costs so much more here.

*President.*—Is the Tata Hydro-Electric rate also 6?

*Major Howard.*—It depends on the load entirely.

*President.*—There is a minimum, isn't there?

*Major Howard.*—No. Under the Tata rate, it is conceivable that a big mill could be charged more than an anna a unit.

*President.*—Do you mean in spite of the amount they take?

*Major Howard.*—Yes. These rates depend upon the ratio, as you probably know, of the maximum load that they take to the average load. In other words if a mill is working for 100 hours a month, it costs them probably 75 per cent. more than the mill which is working 200 hours. That is the whole thing, and we ought to strive to get a higher average load because it pays us so much better. Therefore we attempt, as far as we can, to penalise the mill or the consumer that only takes power for a few hours every day.

*President.*—The average rate at which all the industries in Jamshedpur and round about get their electricity from Tata's is 9 pies.

*Major Howard.*—Yes, 75 anna per unit.

*President.*—That of course is rather a high rate for industrial purposes as compared with other countries?

*Major Howard.*—I do not know.

*President.*—When we looked into the Match Industry we found what a difference it made between the rate of electricity here and the rate of electricity in Scandinavian countries.

*Major Howard.*—That is different. Look at the wonderful natural advantages they have there!

*President.*—It gives them a tremendous pull.

*Major Howard.*—No country in the world can compete with Scandinavia for the generation of cheap power. It is useless to try. You have not got the same advantages anywhere else in the world. The only way to do is to artificially subsidise it. Technically we have one of the finest little schemes in the world but on account of the high cost of transmission and the scattered nature of the load, we can never compete with Scandinavia. In your argument you ought to wipe that out of consideration because they are so well favoured from the natural point of view.

*President.*—That is quite true.

*Mr. Rahimtoola.*—You gave us to understand that you indirectly controlled the rates of the individual consumers through municipalities. May I know what kind of control you exercise over the municipalities with regard to these electric schemes?

*Major Howard.*—For instance, we don't grant a licence unless they agree not to exceed a certain maximum rate for the various classes of load and they can go as much lower as they like, but they must not exceed that maximum; otherwise we don't give them any licence.

*Mr. Rahimtoola.*—Does that mean that they differentiate between big millowness or mills and other individual consumers like houses and so on?

*Major Howard.*—It is done all over the world.

*Mr. Rahimtoola.*—I want to know whether that freedom is given by the licence that you give?

*Major Howard.*—We specify the various classes of load and of course the textile mill load comes in a class by itself.

*Mr. Rahimtoola.*—Therefore you not only lay down the maximum but also you lay down the maximum for each load?

*Major Howard.*—Yes, for each class of load.

*Mr. Rahimtoola.*—Have you seen the letter of the Electrical Inspector to Government which has been forwarded to us along with years by the Government of Madras?

*Major Howard.*—No, I haven't.

*Mr. Rahimtoola.*—It has come to us along with your letter with a covering letter from the Government of Madras. I want to ask you about one or two statements made therein. It is stated that one municipal electrical engineer considered that the quality of the Indian cable was distinctly unsatisfactory.

*Major Howard.*—I have never heard of any complaint against the Indian cables.

*Mr. Rahimtoola.*—That is the statement made here. It is said that the quality of the cable was found distinctly unsatisfactory.

*Major Howard.*—It is rather difficult to base an opinion on that. I should say that it was rather doubtful or it might have been an isolated case which would happen to any cable because we have to remember that the Indian Cable Company's works are in the hands of people who know how to produce cables. They only know too well that unless they produce cables satisfactory to engineers they would not find any sale for them.

*Mr. Rahimtoola.*—This is a distinct statement made here. I want to know whether you are in a position to substantiate that fact.

*Major Howard.*—That would require a little examination too. As I said before, a particular length or piece of cable might have got damaged in transit. I don't think that we could make a general statement like that—not by any means.

*Mr. Rahimtoola.*—Your general requirements are for cables of over 1/80th square inch in cross sectional area?

*Major Howard.*—Yes. Our requirements for the smaller cables are practically negligible.

*Mr. Rahimtoola.*—At present they are coming in duty free?

*Major Howard.*—Yes.

*Mr. Rahimtoola.*—Therefore your objection is on that ground that it will increase indirectly the price to the consumer?

*Major Howard.*—Yes, it will increase the price to the consumer. My great objection is, as the Chairman has already pointed out, that it is probably going to be the means of condemning line extensions into rural areas in many places because the small margin which we allow will be wiped out by the extra 15 per cent. of capital expenditure.

*Mr. Rahimtoola.*—As far as your statement is concerned, I find that you have been using only aluminium steel reinforced cables?

*Major Howard.*—Yes. We shall use a certain amount of copper afterwards. As I mentioned in July last, if copper had been cheaper from every point of view, we should have used it on the main lines instead of aluminium.

*Mr. Rahimtoola.*—You have personally no experience of cables manufactured by the Indian Cable Company?

*Major Howard.*—No. I have seen their catalogues. I must say that they impressed me. They appear to be quite up to the ordinary standard.

*Mr. Rahimtoola.*—Your another objection is I take it that in case a duty is put on copper wire or cables, which will render their use uneconomical, the Companies would generally go in for aluminium or copper clad steel cables?

*Major Howard.*—Obviously, we should have to do it more than we do now. As I have mentioned, there are also other conductors which might have a bigger sale—those which have an aluminium or cadmium base.



*Letter No. 314, dated the 1st June, 1931, from the Tariff Board, to the Collectors of Customs, Calcutta, Bombay, Karachi, Madras and Rangoon.*

I am directed to refer to the Government of India, Commerce Department, Resolution No. 707-T. (1), dated the 11th May, 1931, regarding the grant of protection to the manufacture of electric wires and cables.

2. The Board would be grateful if you would furnish a statement showing recent invoice prices, if available, of typical classes and sizes, not less than 1/80th square inch in sectional area of (i) bare hard drawn electrolytic copper wire and (ii) rubber insulated cable. Full particulars may kindly be given of each class and size for which prices are given.

3. The Indian Cable Co., Ltd., has suggested that specific duties should be levied on certain classes and sizes of rubber insulated cables and the proposals are summarised in the following schedule:—

Size.	Braided Cable.	Lead covered Cables. Single.	Twin.	Tough Rubber Sheathed Cables Single.
	Rs. A.	Rs. A.	Rs. A.	Rs. A.
1/·036 . . .	1 0	2 8	2 12	...
1/·044 . . .	1 0	2 8	3 0	2 0
3/·029 . . .	1 0	3 0	4 8	2 4
1/·064 . . .	1 4	3 0	5 0	2 8
3/·036 . . .	1 4	3 8	6 10	2 8
7/·029 . . .	1 8	5 0	7 12	3 0
7/·036 . . .	2 0	6 0	9 0	3 4
7/·044 . . .	2 8	...	...	4 0

The Board would be glad to receive your opinion on the administrative aspect of the proposal.

4. Finally the Board would be glad to know whether you think there would be any administrative difficulty in distinguishing (i) paper insulated from rubber insulated cables and (ii) Telegraph and Telephone wires and cables from bare hard drawn electrolytic copper wires. The Board is aware that such distinctions are made in the Trade Returns now and would like to know whether, if it were decided to levy separate rates of duty on these classes of wires and cables, it would involve special difficulties and whether the distinction between the various classes could be made with sufficient accuracy for Customs purposes.

5. I am to ask that the reply to this letter together with five spare copies may be sent as early as possible and not later than 4th July.

### Collector of Customs, Calcutta.

*Letter No. 215, dated the 20th June, 1931.*

I have the honour to refer to your letter No. 314/C-7, dated the 1st June, 1931.

2. The statement required in the second paragraph of your letter is herewith enclosed.

3. The imposition of specific duties on certain definite sizes and classes of cables may not in theory be attended with administrative difficulties. But in practice such a system would involve a stricter scrutiny and examination than is necessary at present and thus add materially to the labour involved in clearance, and tend to cause delay. This of course applies to all cables and not merely to those found liable to the protective duty. It is for consideration also whether the specification of sizes would not lead to evasion owing to the

tendency to substitute goods of slightly different size but answering the same purpose. I therefore consider that it would be more convenient to impose an *ad valorem* duty within limits specified by sectional area.

4. With regard to paragraph 4 of your letter I would point out that the distinction between paper insulated and rubber insulated wires already exists in the present tariff, and no administrative difficulty has so far been experienced. Bare hard drawn electrolytic copper wires for telegraph and telephone purposes cannot be distinguished from those used for other electric transmission. For this reason all imports of hard drawn bare electrolytic copper wire have been posted under the trade heading "Bare hard drawn copper wire other than for telephone and telegraph purposes".

Enclosure.

Size.	Price.	Insulation.	Country of Origin.	Definition of classes.
<i>Cables not less than 1/80"—Rubber insulated.</i>				
7/064	Per 1,000 yards. £ s. d. 20 4 0 c.i.f.	Class "G"	Britain	Class "G"—Tinned copper wire, one coat of clear rubber and two coats of vulcanised rubber, taped, compounded and braided together.
91/018	280 0 0 f.o.b.	C. T. S. Trailing Cable with cradle centre tough rubber.	Do.	C. T. S. Trailing Cable—Conductor of tinned copper wires, pure and double vulcanised India rubber insulated (49 mils), 4 cores stranded round a cradle centre (80 mils web), cab tyre sheathed (50 mils), canvas taped (25 mils) and cab tyre sheathed (75 mils) overall.
19/044	20 16 9 less 5 per cent. c.i.f.	V. I. R. 600 megohm	Germany	....
7/18 S. W. G.	27 18 0 less 5 per cent. c.i.f.	V. I. R. lead covered flat twin wire 600 megohm grade.	Do.	....
7/064	48 18 0 less 5 per cent. c.i.f.	Ditto	Do.	....
7/18 S. W. G.	15 15 0 less 5 per cent. c.i.f.	V. I. R. lead covered single wire 600 megohm grade.	Do.	....
7/064	27 2 0 less 5 per cent. c.i.f.	Ditto	Do.	....
7/064	80 8 0 f.o.b.	Class 112 twin lead covered cable.	Britain	Class 112—Conductors of high conductivity tinned copper wires insulated with one layer of pure and two layers of vulcanising India rubber, taped and the whole vulcanised together. Two cores, one red and one black, laid side by side and covered with a solid tube of lead. 600 Meg. grade.
7/064	25 2 5 f.o.b.	Class 101 V. I. R. Wire 600 Meg. C. M. A. grade.	Do.	Class 101—Conductors of high conductivity tinned copper wires insulated with one layer of pure and two layers of vulcanising India rubber, taped, the whole vulcanised together, braided and compounded. 600 Meg. grade.

Size.	Price.	Insulation.	Country of Origin.	Definition of Classes.
<i>Cables not less than 1/80"—Rubber insulated—contd.</i>				
19/064	Per 1,000 yards. £ s. d. 84 17 10 f.o.b.	Class 101 Vicma Grade V. I. E. Wire 600 Meg.	Britain	Vicma Class 101—Conductors of high conductivity tinned copper wires insulated with two layers of vulcanising India rubber, taped, the whole thing vulcanised together, braided and compounded.
19/083	100 3 4 f.o.b.	Ditto	Do.	....
19/072	79 7 7 f.o.b.	Ditto	Do.	....
<i>Hard drawn bare copper wire not less than 1/80".</i>				
	Per ton, less 1 per cent. c.i.f.			
S. W. G. 2	£ s. d. 59 13 0	....	Britain.	
S. W. G. 4	60 3 9	....	Do.	
S. W. G. 6	60 6 3	....	Do.	
S. W. G. 8	60 10 3	....	Do.	
S. W. G. 10	61 0 0	....	Do.	

### Collector of Customs, Bombay.

*Letter R. S. R. No. 2968 of 1931, dated Bombay, 25th June, 1931.*

Your letter No. 314/C-7, dated 1st June, 1931.

In forwarding herewith a statement as required in paragraph 2 of your letter cited above, I have the honour to offer the following remarks.

2. I anticipate no administrative difficulty in putting into effect the proposal for specific duties for the various classes and sizes enumerated in your letter. It is presumed that the "Tough Rubber sheathed cables" referred to in the fifth column of the schedule proposed by the Indian Cable Co., Ltd., and mentioned in paragraph 3 of your letter are what are known in the trade as "Cab tyre sheathed cables". I have also taken that the specific duties mentioned are for every 1,000 yards.

3. Regarding paragraph 4, I may state that there will be no difficulty in distinguishing paper insulated from rubber insulated cables, but it will not be possible to differentiate between telegraph and telephone wires and bare hard drawn electrolytic copper wires as the former are frequently of bare hard drawn electrolytic copper. It is, however, quite simple to distinguish the multicore underground telephonic cables.

Enclosure.

Rubber insulated cable.

Sizes.	BRITISH.				CONTINENTAL.			
	Braided.	LEAD COVERED.		Cab Tyre Sheathed Single.	Braided.	LEAD COVERED.		Cab Tyre Sheathed Single.
		Single.	Twin.			Single.	Twin.	
7/052 . . .	£ s. d. 17 9 7 to 19 13 4 21 19 8	£ s. d. 39 5 0	£ s. d. 63 4 2	£ s. d. 27 4 2	£ s. d. 11 11 0 to 13 9 3 13 5 0	£ s. d. 14 15 0	£ s. d. 30 0 0	£ s. d. ..
7/064 . . .	to 26 14 1 27 18 0	50 7 6	76 6 6 to 81 11 8 105 1 0	86 17 6	to 19 3 6 18 8 7	20 0 0	28 1 0 to 42 0 0	16 10 0 to 17 0 0
19/044 . . .	..	..	..	..	to 25 4 9 24 8 0	..	..	..
19/052 . . .	88 17 11 to 45 17 6	..	127 10 10 to 135 6 7	58 0 0	to 32 11 6 36 18 6	32 0 0	66 0 0	..
19/064 . . .	63 0 0	..	169 13 4	75 17 6	to 47 8 6 45 5 0	45 0 0	95 0 0	..
19/072 . . .	80 9 9 to 77 2 6 78 8 2	..	195 9 2	105 3 8	to 62 0 0 58 0 0	..	..	..
19/088 . . .	..	..	..	..	to 74 14 6 69 18 0	..	..	..
37/064 . . .	119 6 10	..	265 14 2	132 5 10	to 90 4 0 32 7 0	..	..	..
37/072 . . .	..	..	..	..	to 111 12 6 103 0 0	..	..	..
37/088 . . .	184 4 8	..	407 0 0	201 10 0	to 145 3 0	..	..	..

Prices given are c.i.f. per 1,000 yards.

\* Bare hard drawn electrolytic copper wire of sectional areas not less than  $\frac{1}{16}$ th square inch—c.i.f. prices.

† From £52 to £54 per ton.

‡ I.e., sizes up to 10.

§ Value is given according to weight.

## Collector of Customs, Rangoon.

Letter dated the 26th June, 1931.

I have the honour to reply to your letter No. 314/C-7, dated the 1st June, 1931.

2. I enclose statements marked I and II of invoice prices of consignments imported this year of Bare Hard Drawn Electrolytic Copper Wire and Rubber Insulated Cables each not less than 1/80th square inch in sectional area. It may be of interest if I enclose 2 further lists, (1) my list marked III, similar wires insulated with other than rubber and (2) also, my list marked IV, a comprehensive list of all importations of electrolytic wires and cables imported at this port since the 1st January, 1931, which list naturally includes those which have been extracted to form lists I, II and III.

3. Your letter does not make it clear exactly, how the specific duty is to be charged, but I take it that the specific rates mentioned are per 100 yards. It would be simpler from the purely administrative point of view if the specific duty was on a weight basis, but I do not anticipate any serious difficulties if it is on a yardage basis. With regard to your fourth para. there will be no difficulty in distinguishing paper insulated from rubber insulated cables, while as between telephone and telegraph wires and cables from bare hard drawn electrolytic copper wires, a distinction can, I think, be made with sufficient accuracy. Normally telegraph and telephone wires are made from galvanised iron and the point does not arise. While in the case of copper wires, imports of electrolytic wire into Rangoon have always been intended for part of a high tension transmission scheme the facts being clear from the invoice, and imports of copper telegraph and telephone wires, if any, will be few and could be specially tested.

*I.—Bare hard drawn electrolytic copper wire not less than 1/80th square inch in sectional area.*

		Per ton.
		£ s. d.
A. Johnson & Co.	1/0, S. W. G. —6, —8, —8, B. H. D. E. Copper Wire.	62 0 0 c.i.f.
Thos. Bolton & Co.	1/10, S. W. G. B. H. D. E. Copper Wire . . .	58 0 0 Do.
		Rs. A. P.
Siemens	S. W. G. 0, —2, —4, —6, —8, —10, —100, B. H. D. Copper Wire.	800 0 0 Do.
		£ s. d.
Pirelli General	S. W. G. 6, B. H. D. E. Copper Wire . . .	62 12 6 Do.
Cable Works Southampton	S. W. G. 8, B. H. D. E. Copper Wire . . .	62 15 0 Do.
	S. W. G. 4, Ditto . . .	64 10 9 Do.
	S. W. G. 10, Ditto . . .	64 15 0 Do.

*II.—Rubber Insulated Cables not less than 1/80th square inch in sectional area.*

		Per 100 yds.
		£ s. d.
W. T. Glover & Co., Ltd., Manchester.	19/044 Spec. 5102 single core rubber insulated taped and braided rubber cable.	8 10 6 c.i.f.
	19/064 Ditto ditto . . .	6 9 11 Do.
	19/083 Ditto ditto . . .	10 0 5 Do.
	7/052 Spec. 6140 twin rubber insulated taped and lead covered cable.	1 11 5 Do.
	7/064 Ditto ditto . . .	8 8 1 Do.

III.--Insulated other than rubber.

		Per 1,000 yds.	
		£	s. d.
Pirelli General Cable Works	7/-064 Class 101 V <sup>o</sup> I. R. Cable . . . . .	25	2 5 f.o.b.
	37/-072 Ditto . . . . .	149	6 2
		Per 1,000 ft.	
		£	s. d.
General Electric Co.	3 x .06 sq. inch impreg. P. I. lead covered comp. jute sewed, D. S. T. armoured and comp. jute sewed cable 6,600 volts sector shaped conductor.	94	6 8 Do.
Callendars Cable	L. T. 4 core .25, .25, .25, .20 sq. inch paper insulated lead sheathed and steel taped cable 660 V. W. P. 37/093 single conductor rubber insulated, taped and braided 660 volts W. P.	203	0 0 Do.
	L. T. 4 core .10, .10, .10, .075 sq. inch paper insulated L. S. and S. T. and 660 volts.	108	16 6 Do.
	L. T. single conductor 127/103 —1.0 sq. inch paper insulated L. S. cable 660 V. W. P.	107	0 0 Do.
		207	0 0 Do.

IV.

		Per 100 yds.	
		£	s. d.
W. T. Glover & Co., Ltd., Manchester.	14/-0076 Spec. 8002 maroon twin rubber insulated and polished cotton braided.	0	17 10 c.i.f.
	16/-012 „ 9164 twin rubber insulated cab. tyre, sheathed cable 600 meg.	9	2 7 Do.
	7/-012 „ 9164 Ditto . . . . .	2	5 2 Do.
	3/-036 „ 5102 single core rubber insulated taped and braided rubber cable.	0	12 5 Do.
	19/-044 „ 5102 Ditto ditto . . . . .	3	10 6 Do.
	19/-064 „ 5102 Ditto ditto . . . . .	6	9 11 Do.
	19/-083 „ 5102 Ditto ditto . . . . .	10	0 5 Do.
	3/-029 „ 5102 twin rubber insulated and polished cotton braided flex.	0	9 3 Do.
	3/-036 „ 5102 Ditto ditto . . . . .	0	12 5 Do.
	7/-036 „ 5102 Ditto ditto . . . . .	1	1 10 Do.
	7/-052 „ 6140 flat twin rubber insulated taped and lead covered cable.	1	11 5 Do.
	7/-029 „ 6140 twin rubber insulated taped and lead covered cable.	2	19 0 Do.
	7/-064 „ 6140 Ditto ditto . . . . .	8	8 1 Do.
	7/-036 „ 6100 single core rubber insulated taped and lead covered cable.	2	1 10 Do.
	3/-029 „ 6140 twin rubber insulated taped and lead covered cable.	1	15 9 Do.
	3/-036 „ 6140 Ditto ditto . . . . .	2	3 0 Do.
	7/-036 „ 6140 Ditto ditto . . . . .	2	1 10 Do.
	1/-044 „ 6140 flat twin rubber insulated taped and lead covered cable.	1	7 10 Do.
	3/-029 „ 6100 single core rubber insulated taped and lead covered.	0	12 5 Do.
	7/-029 „ 6100 Ditto ditto . . . . .	1	11 5 Do.
	3 x .25 sq. inch } Spec. 2095 L. T. 4 core paper insulated lead covered jute served S. T. A. and jute served cable.	26	0 0 Do.
	1 x .2 sq. inch }		
			Per 1,000 ft.
		£	s. d.
		740	0 0 f.o.b.

		Per ton.	
		£	s. d.
A. Johnson & Co.	1/0, —6, —8, B. H. O. copper wire . . . . .	62	0 0 c.i.f.
Thos. Bolton	3 S. W. G. H. D. E. Copper wire . . . . .	62	0 0 Do.
	1/10 S. W. G. H. D. E. Copper wire . . . . .	58	0 0 Do.

		Rs. A. P.	
Siemens	S. W. G. 0, 2, 4, 6, 8, 10, .000, 12, 14 . . . . .	800	0 0

		Per 1,000 yds.	
		£	s. d.
Sonweizerscha Draht and Gummiweiske Switzer- land.	3/-029 Vul. India rubber Swiss Association C. M. A. quality 600 meg.	2	15 0 c.i.f.
	3/-036 Ditto ditto . . . . .	4	13 8 Do.
	7/-029 Ditto ditto . . . . .	5	0 0 Do.
	7/-036 Ditto ditto . . . . .	6	12 0 Do.
	1/-064 Ditto ditto . . . . .	3	8 0 Do.
	1/-044 Ditto ditto . . . . .	1	16 9 Do.



### Collector of Customs, Karachi.

*Letter dated 29th June, 1931.*

I have the honour to refer to your letter No. 314/C-7, dated the 1st June, 1931, and to enclose a statement as required in para. 2 thereof.

2. The distinction between rubber insulated and paper insulated wires is even now made for purposes of assessment and no difficulty is anticipated in this respect. Telegraph and Telephone Wires imported at this port are less than 1/80th square inch in sectional area and no occasion has therefore arisen to distinguish these wires from electrolytic copper wire over 1/80th square inch whether bare or insulated.

#### *Rubber Insulated Cable.*

Description.	Size.	Value.
		Per 100 yards
		Rs. A.
H. U., Rubber insulated, 600 Meg. . . . .	37/·064	96 10
H. U. N. B. S., Rubber insulated 600 Meg. . . . .	37/·083	152 10
H. U., Rubber insulated, 600 Meg. . . . .	7/·064	22 0
H. U. N. B. S., Rubber insulated, 600 Meg. . . . .	19/·052	37 10
H. U. N. B. S., Rubber insulated, 600 Meg. . . . .	19/·063	82 1
N. B. S., 600 Meg. . . . .	7/·064	22 2
N. B. S., Rubber insulated, 600 Meg. . . . .	19/·052	38 3
" " " " . . . . .	19/·064	63 6
" " " " . . . . .	19/·085	84 8
" " " " . . . . .	37/·083	154 0

Bare hard drawn copper wire above 1/80 part of a square inch—  
 From United Kingdom—price 6d. per lb.  
 From Japan—price 5d. per lb.

### Collector of Customs, Madras.

(1) *Letter R. O. R. No. 1270/31-Ap., dated the 30th June, 1931.*

Your letter No. 314/C-7, dated the 1st June, 1931.

I have the honour to forward herewith a statement "A" showing the invoice prices of typical classes and sizes of rubber insulated electric cables of not less than 1/80 square inch imported at this port. As regards bare hard drawn electrolytic copper wire the following are the invoice prices of the three particular sizes generally imported here:—

No. 5 S. W. G. . . . .	£57-0	per ton c.i.f.
No. 8 S. W. G. . . . .	£57-15	" "
No. 10 S. W. G. . . . .	£58-10	" "

The prices usually fluctuate with the rise and fall in the price of copper. The average value for all the sizes mentioned above worked out from the invoice prices of various suppliers is 6d. per lb. weight.

2. As regards paragraph 3, I enclose a statement "B". It will be seen from it that lead covered single cables as also tough rubber sheathed single cables have not, so far as can be ascertained, been imported into this port. However, information regarding the prices and amounts of duty realised on V. I. R. high standard cables is furnished in columns 6 and 15



of the statement. It is understood that these cables are utilised for most of the purposes for which tough rubber sheathed single cables are used. The only criticism that I can offer on the proposals of the Indian Cable Company, Limited, as summarised in the schedule given, is that the specific rates proposed seem to be low when compared with the actual duty now collected on the basis of the invoice values, and that the differences in the proposed rates for the several sizes and qualities do not appear to be in proportion to the differences in the invoice values for the same sizes and qualities. I do not consider that there would be any great difficulty in the application of specific duties to cables. It is true that at present many manufactures invoice their cables in catalogue code terms, which necessitates checking of descriptions, etc., by reference to catalogues and lists; but with the incidence of the proposed duties they will doubtless, in their own interests, provide full particulars on their invoices.

3. No difficulty has so far been experienced in distinguishing between paper insulated and rubber insulated cables as they are always invoiced clearly. The use to which the cables are intended to be put is also a guide, as paper insulated cables are invariably used for laying underground cables.

4. It is understood that bare hard drawn electrolytic wires of the following sizes are ordinarily used for telegraph and telephone purposes:—

- (a) Nos. 8 and 9 S. W. G. . . . . For trunk lines.
- (b) No. 10 S. W. G. . . . . For long distance lines other than trunk lines.
- (c) Nos. 14, 16 and 18 S. W. G. . . . . For ordinary service lines.

Of these (a) and (b) are submitted free of duty under item 96 (5) of the Indian Customs Tariff and duty is levied on (c) under item 83, *ibid.* There are no means by which any distinction can be made between the wires in (a) and (b) from wires of the same sizes, which are used for the transmission of power. In this connection it may not be out of place to mention, for the Board's information that it has been noticed that bare hard drawn electrolytic copper wires of the larger sizes such as 7 and 5 S. W. G. are sometimes imported at this port by hardware merchants through firms of electrical engineers for other than electrical use. Copies of correspondence which I have had on this question with the Collectors of Customs at the other ports and with the Central Board of Revenue are enclosed for the Board's perusal and any action it may think fit to take.

Enclosure No. 1.

*Copy of letter R. No. 1973/30-Ap., dated the 23rd September, 1930, from the Collector of Customs, Madras, to all other Collectors of Customs.*

**ASSESSMENT—HARD DRAWN ELECTROLYTIC COPPER WIRE.**

I have the honour to state that The Crompton Engineering Company, Limited, Madras, recently imported at this port 20 tons hard drawn electrolytic copper wires on behalf of one Mr. R. P. Krishnappa Chetty, Madras, who is a dealer in hardware and metals. The consignment was passed free under item 96 (5) of the Indian Customs Tariff. The wires were of unusually large sizes, being in some cases of 7 and 5 S. W. G., which are not ordinarily imported except on specified contracts, for Transmission Systems. The fact of their importation by a hardware merchant having attracted the attention of the appraiser, careful enquiries were made in the market, and it was discovered that hard drawn electrolytic wires are imported to a considerable extent by hardware merchants through firms of Electrical Engineers for making handles, etc., for copper vessels and copper bangles and anklets for over-lying with gold or silver. Thus the purpose of the Tariff in conferring a concession on bare hard drawn electrolytic copper wires of sectional area of not less than 1/80th part of a square inch, is being frustrated.

2. From a study of the invoice values it is found that hard drawn electrolytic copper wire is comparatively cheaper than other cables such as the "Annealed" or the "Soft" varieties, which are liable to duty at 15 per cent. under item 111 of the Indian Customs Tariff regardless of the size. It is therefore expected that there would be an increase in the import of the wire, under reference for use as hardware.

3. Before reporting the matter to the Board, I should be glad to know whether a similar diversion of use of hard drawn electrolytic wire has been noticed at your port.

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II.—Copy of letter C. No. 2210/30, dated the 6th October, 1930, from the Collector of Customs, Karachi, to the Collector of Customs, Madras.

ASSESSMENT—HARD DRAWN ELECTROLYTIC COPPER WIRE.

Your letter R. No. 1973/30-Ap., dated the 23rd September, 1930.

I have the honour to refer to your letter quoted above and to state that a similar diversion of use of the wire mentioned has not been observed at this port.

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III.—Copy of letter No. 4780, dated the 11th October, 1930, from the Collector of Customs, Calcutta, to the Collector of Customs, Madras.

ASSESSMENT—HARD DRAWN ELECTROLYTIC COPPER WIRE.

I have the honour to refer to your letter R. No. 1973/30-Ap., dated the 23rd September, 1930.

2. The extensive use of hard drawn electrolytic copper wire of sectional area of not less than 1/80th part of a square inch for purposes other than electrical has not been noticed at this port.

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IV.—Copy of letter R. S. R. No. 6811, dated the 15th October, 1930, from the Collector of Customs, Bombay, to the Collector of Customs, Madras.

HARD DRAWN ELECTROLYTIC COPPER WIRE.

Your letter R. No. 1973/30-Ap., dated the 23rd September, 1930.

In reply to your letter cited above, I have the honour to state that importations of hard drawn bare copper wire of the sizes mentioned therein have not been noticed at this port and from enquiries made in the local market it has been ascertained that such sizes have not been imported by principal importers of this class of wire here.

The value of electrolytic copper wire at present is £65 per ton f.o.b. compared with 8 pence per lb. for soft varieties which works out to £74-13-4 per ton f.o.b. Owing to its hardness, however, hard drawn bare copper wire is very difficult to work and it is doubtful whether with the extra expense that would have to be incurred, it would be very much cheaper to use it than to use the soft quality. At the same time, I quite agree that the present position in which electrolytic copper is selling cheaper than soft copper is extremely unsatisfactory. I am informed that the situation has resulted from the over-production of electrolytic copper and that it can only be temporary. I am, however, instructing the Appraising Department to keep a careful watch on such importations.

I may add here that importers of soft copper wire sometimes try to pass their goods as hard drawn bare copper wire, but examination in such cases shows that the wire is really soft drawn and not hard drawn as the importers try to make out and the goods are assessed accordingly.

V.—Copy of letter C. No. 702, dated the 15th October, 1930, from the Collector of Customs, Rangoon, to the Collector of Customs, Madras.

**HARD DRAWN ELECTROLYTIC COPPER WIRE—USED FOR MAKING HANDLES, ETC., FOR COPPER VESSELS AND FOR BANGLES AND ANKLETS—ASSESSMENT OF.**

I have the honour to refer to your letter No. R. 1973/30-Ap., dated the 23rd September, 1930, on the above subject and to say that no such diversion has been noticed here, but, did it occur, I should view it with equanimity in view of the principles on which the tariff is framed. I would instance Customs Circular No. I of 1895 and the matter of rails mentioned in item (IV), page 225, of the Burma Appraisers' Manual.

2. Kindly inform me of your final decision.

VI.—Copy of letter R. O. R. No. 1973/30-Ap., dated the 15th June, 1931, from the Collector of Customs, Madras, to the Secretary, Central Board of Revenue, Simla.

**ASSESSMENT—HARD DRAWN ELECTROLYTIC COPPER WIRE.**

Correspondence resting with your post card C. No. 783-Cus.-I./30, dated the 18th November, 1930.

I have the honour to forward herewith a statement of the importations in this port of hard drawn electrolytic copper wire during the six months ending 15th May, 1931. Of the total quantity imported, viz., 139 tons 3 cwt. 2 qrs. 4 lbs., there is reason to believe that a quantity of about 21 tons was imported for retail supply to the local bazaarsmiths for re-manufacturing purposes. The diversion of the use of the hard drawn electrolytic wire to purposes other than electrical is not found to be as extensive as at first apprehended and is probably only temporary and due to the fact that the price of electrolytic wire is cheaper than ordinary wire owing to over production. The matter, however, will be brought to the notice of the Tariff Board in connection with a report called for by that body on the question of granting protection to electric wires and cables.

Enclosure No. 2.

**STATEMENT A.**

*Statement of invoices, prices, rates and description of rubber insulated cables about 1/80 square inch.*

Size. P.	VALUES—QUOTED.		Unit.	Description.
	£ s. d.	F.O.B. or C.I.F.		
7/-052 . . .	27 19 3	C.I.F.	Per 1,000 yds.	Vulcanite India rubber (V. I. R.) braided; British Engineering Standard specifica- tion. (B. E. S.).
7/-052 . . .	16 8 0	F.O.B.	1,000 "	V. I. R. Cheaper quality.
7/-064 . . .	22 12 6	C.I.F.	1,000 "	V. I. R.—B. E. S. quality.
7/-064 . . .	22 6 0	F.O.B.	1,000 "	V. I. R. Standard quality.
19/-044 . . .	35 5 7	C.I.F.	1,000 "	V. I. R.—B. E. S. quality.
19/-044 . . .	28 15 3	F.O.B.	1,000 "	V. I. R. Cheaper quality.
19/-052 . . .	47 5 0	C.I.F.	1,000 "	V. I. R.—B. E. S. quality.
19/-052 . . .	35 1 0	F.O.B.	1,000 "	V. I. R. Cheaper quality.
19/-052 . . .	41 7 7	C.I.F.	800 "	V. I. R. Braided.
19/-064 . . .	46 3 6	F.O.B.	1,000 "	V. I. R. Standard quality.
19/-064 . . .	44 16 1	C.I.F.	1,000 "	V. I. R. Cheaper quality—braided.
19/-064 . . .	169 5 6	C.I.F.	1,000 "	I. R. insulated lead sheathed twin cable.
19/-072 . . .	58 13 9	F.O.B.	1,000 "	V. I. R. Standard quality.
19/-083 . . .	100 3 4	C.I.F.	1,000 "	V. I. R. Special good quality.
19/-083 . . .	72 9 6	F.O.B.	1,000 "	V. I. R. Second quality.
19/-083 . . .	76 2 5	C.I.F.	1,000 "	V. I. R. Standard quality braided.

Bigger size cables other than the above have not been imported into this port recently. However, the present quotation f.o.b. London, obtained from a leading firm of Electrical Engineers is herewith put up:—

Sizes.	Prices.	Description.
37/·064 . . . . .	89 3 9	} V. I. R. per 1,000 yards.
37/·072 . . . . .	105 2 0	
37/·083 . . . . .	135 8 3	
37/·093 . . . . .	167 14 9	
37/·103 . . . . .	202 11 3	
61/·093 . . . . .	269 3 0	
61/·103 . . . . .	314 6 6	
91/·093 . . . . .	378 13 3	
91/·103 . . . . .	445 18 6	
127/·093 . . . . .	511 13 9	
127/·103 . . . . .	603 15 3	

Enclosure No. 3.

STATEMENT B.

Comparative statement showing the effect on present amount of duty if proposed specific rates are brought into force, compiled from the recent invoice values of various sizes and types of electric cables imported into Madras.

1 Size of wire.	2 Braided cable.	3		4	5	6	7	8
		LEAD-COVERED CABLES.		Tough single rubber-sheathed cables.	V. I. E. Cables High Standard Single.	SUMMARISED PROPOSALS OF		
		Single.	Twin.			Braided cable.	LEAD-COVERED. Single.	
	Per 1,000 yds. £ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Per 100 yds. £ s. d.	Rs. A. P.	Rs. A. P.
1/-036 . . . . .	3 10 9	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	1 0 0	2 8 0
1/-044 . . . . .	3 9 4	<i>Nil.</i>	13 18 11	<i>Nil.</i>	0 6 7	1 0 0	2 8 0	
3/-029 . . . . .	4 10 10	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	1 0 0	3 0 0	
1/-064 . . . . .	<i>Nil.</i>	<i>Nil.</i>	18 7 3	<i>Nil.</i>	0 9 4	1 4 0	3 0 0	
3/-036 . . . . .	6 2 8	<i>Nil.</i>	22 2 3	<i>Nil.</i>	0 11 5	1 4 0	3 8 0	
7/-029 . . . . .	8 6 7	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	0 18 0	1 8 0	5 0 0	
7/-036 . . . . .	11 16 5	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	2 0 0	6 0 0	
7/-044* . . . . .	13 19 5	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	1 5 10	2 8 0	<i>Nil.</i>	

\* These sizes are rarely imported at this part.

Rounds.

Squares.

1	9	10	11	12	13	14	15
Size of wire.	SPECIFIC DUTIES (PER 100 YDS.)		DUTY AT 20 PER CENT. APPROX. ON RECENT INVOICE VALUES.				Duty at 10 per cent. on values of V. I. E. High Standard.
	CABLES.		Braided.	LEAD-COVERED.		T. R. S. Cable Single.	
	Twin.	Tough rubber-sheathed single.		Single.	Twin.		
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1/-036 . . . . .	2 12 0	..	0 15 0	Nil.	Nil.	Nil.	Nil.
1/-044 . . . . .	8 0 0	2 0 0	0 14 0	Nil.	8 11 0	Nil.	0 14 0
3/-029 . . . . .	4 8 9	2 4 0	1 8 0	Nil.	Nil.	Nil.	Nil.
1/-064 . . . . .	5 0 0	2 8 0	Nil.	Nil.	4 14 0	Nil.	1 3 0
. . . . .	6 10 0	2 8 0	1 10 0	Nil.	5 14 0	Nil.	1 8 0
7/-029 . . . . .	7 12 0	3 0 0	2 9 0	Nil.	Nil.	Nil.	2 8 0
7/-036 . . . . .	9 0 0	3 4 0	3 2 0	Nil.	Nil.	Nil.	Nil.
7/-044 . . . . .	Nil.	4 0 0	3 12 0	Nil.	Nil.	Nil.	3 7 0

(2) *Letter R. O. R. No. 1270/51-Ap., dated the 7th July, 1931, from the Collector of Customs, Madras.*

In continuation of this office letter cited above, I have the honour to forward herewith for the information of the Board a copy of the letter from the Central Board of Revenue, Simla, C. No. Cus.-I.-30, dated the 2nd July, 1931, together with a copy of the enclosure thereto.

Enclosure.

*Copy of letter C. No. 783-Cus.-I./30, dated the 2nd July, 1931, from the Officiating Secretary, Central Board of Revenue, Simla, to the Collector of Customs, Madras.*

**HARD DRAWN ELECTROLYTIC COPPER WIRE—ASSESSMENT OF.**

Your letter R. O. R. No. 1973/30-Ap., dated the 15th June, 1931.

With reference to the correspondence ending with your letter quoted above, I am directed to enclose a copy of letter from the Collector of Customs, Bombay, R. S. R. No. 6811 of 1930, dated the 11th June, 1931, and to suggest that the recommendation contained therein may also be mentioned in your report to the Tariff Board in connection with the question of granting protection to electric wires and cables.

Enclosure.

*Copy of letter R. S. R. No. 6811/30, dated the 11th June, 1931, from the Collector of Customs, Bombay, to the Secretary, Central Board of Revenue, Simla.*

**HARD DRAWN ELECTROLYTIC COPPER WIRE—ASSESSMENT OF.**

Your letter C. No. 783-Cus.-I./30, dated the 27th November, 1930.

I have the honour to state that, as desired by the Board in the letter cited above, a special watch was kept for the last six months and it has been found that only two consignments of hard drawn electrolytic copper wire of large size, viz., 4/0 and 7/0 were imported here during the period. The 4/0 size wire was used for electrical transmission while the other was sold to hardware dealers to be used mainly for making bangles. It has been ascertained that hard drawn copper wire up to 4/0, only is used as electric wire while that of the sizes 5/0, 6/0 and 7/0 is not used for electric transmission line as it is hard to work on insulators. Whenever wire of the size about 4/0 is required for transmission purposes, generally stranded wire is used as recommended by Electrical Engineers. I agree with the Collector of Customs, Madras, that the process of softening hard drawn copper wire is neither difficult nor expensive and such wire of thickness above 4/0, which is more suitable for making bangles, can easily be turned into soft wire.

For the above reasons I think that hard drawn copper wire of sizes 5/0, 6/0 and 7/0 can be assessed to duty without any way interfering with the legitimate electric trade.

**Director, Geological Survey of India, Calcutta.**

(1) *Letter No. 311, dated the 1st June, 1931, from the Secretary, Tariff Board, to the Director, Geological Survey of India, Calcutta.*

I am directed to refer to the Government of India, Commerce Department, Resolution No. 707-T. (1), dated the 11th May, 1931, a copy of which I enclose.

2. One of the conditions laid down by the Fiscal Commission which an industry should satisfy in order to justify a claim for protection is that ample raw material should be available in India. With reference to this condition the Indian Cable Company, Limited, who are the applicants in this case, state as follows:—

“ There is an abundant supply of copper ore at Ghatsila 18 miles away from our factory which is used for the production of copper suitable for the manufacture of brass. The importation of such copper (or brass) is subject to 15 per cent. duty. Electrolytic Copper in Rod form, such as we need, is not produced possibly for two reasons; (a) Insufficient demand, (b) unattractive price. The latter is attributable to the fact that Copper Ingot is protected to the extent of 15 per cent. whereas the products with which our factory has to compete are admitted duty free.”

3. The Board would be grateful if you would be so good as to furnish information on the following points if available:—

- (i) What is the estimated available quantity of copper in the mines referred to?
- (ii) What other copper mines are there in India and what is the total estimated available quantity of copper?
- (iii) Is the copper obtained at Ghatsila suitable for the manufacture of electrolytic Copper Rod?
- (iv) Are the mines at Ghatsila now being worked? If so, what is their annual production of copper?

4. I am also to ask if you will be good enough to inform the Board whether lead is available in India, apart from the mines in Burma, and if so where and in what quantities.

5. The Board would be grateful if a reply to this letter together with five spare copies could be sent not later than July 4th.

(2) *Letter No. 256/C/1415, dated the 16th June, 1931, from the Director, Geological Survey of India, Simla.*

With reference to your letter No. 311/G-8, dated the 1st June, 1931, I have the honour to reply to the interrogations as under:—

(i) According to the estimate of the Indian Copper Corporation Limited who are working the deposits, the total ore reserves at Mosaboni (the mine at present being worked) at the close of the year 1930, amounted to 697,146 short tons of 3.208 per cent. of ore, representing a content of 22,364 short tons of copper. According to the same Company the diamond drilling campaign at Dhobani gave very encouraging results and indicated the presence of 75,000 short tons of probable ore reserves having an estimated average assay value of 4.98 per cent. of copper.

(ii) Copper is found at Bawdwin in the Northern Shan States of Burma, reserves of copper-ore were reported in 1928, by the Burma Corporation to amount to 350,000 long tons averaging about 13 per cent. of lead, 8 per cent. of zinc, 7 per cent. of copper and 18 ounces of silver to the ton. A more recent estimate of copper-ore reserves is not available, but a reference to the Burma Corporation may elicit more up-to-date information on the point. Copper-matte is at present regularly produced by the Burma Corporation at their Namtu smelting works. The production of copper-matte in 1930, amounted to 17,146 long tons averaging 41.9 per cent. of copper, 21.017 per cent. of lead and 69.85 ounces of silver to the ton. The matte is exported to Hamburg for further treatment.

(iii) The refining process employed at Raubhandar near Ghatsila is a furnace refining process and not an electrolytic process. Furnace refining gives a product having a somewhat lower purity than the electrolytic process. There is no information in this office concerning the actual purity of the refined copper produced at Ghatsila. but it is believed to compare very favour-



ably with electrolytic copper. I am, however, making enquiries on this point.

(iv) Yes. The production of refined copper amounted to 1,635 long tons in 1929, and 2,974 long tons in 1930. Of the total production of 2,974 tons in 1930, 540 tons were consumed in the new rolling mill for the manufacture of yellow metal sheet. The quantity of this sheet produced in 1930, amounted to 712 tons.

As regards lead, attention is invited to Records, Geological Survey of India, Vol. LXIV, pages 78—88, where all the known occurrences of lead-ore have been described. With the exception of the mines in the Northern and Southern Shan States in Burma, there are at present no other mines in India producing lead-ore in any quantity.

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(3) *Letter No. 349/C/1415, dated the 27th June, 1931, from the Director, Geological Survey of India.*

With reference to para. (iii) of my letter No. 286/C/1415 of the 16th June, 1931, I write to say that I have now obtained the desired information concerning the composition of the refined copper produced at Ghatsila. The Manager of the Indian Copper Corporation Limited, informs me that his Company's refined copper ingot assays approximately 99.60 per cent. of copper, whereas electrolytic copper should assay not less than 99.94 per cent. of copper. The copper manufactured by the Indian Copper Corporation is, therefore, not suitable for the manufacture of electrolytic copper rod. On the question of the manufacture of electrolytic copper, the Manager of the Indian Copper Corporation writes as follows:—

“As a matter of fact, we have considered this question before, but the capital expenditure involved has so far placed it out of the question. We should, of course, be very pleased to have an additional outlet for our copper, but under present circumstances it would entail first the election of an electrolytic refinery, and secondly, the erection of an extruding plant for the manufacture of electrolytic copper rod. Both of these plants are costly installations and in view of the comparatively small market that will thereby be opened to us, considerations of this question have been shelved, and we are at present concentrating our thoughts on increased production in the direction of rolling yellow metal sheets.”

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### Indian Stores Department.

(1) *Letter No. 310, dated the 1st June, 1931, from the Secretary, Tariff Board, to the Chief Controller of Stores, New Delhi.*

I have the honour to refer to the Government of India, Commerce Department Resolution No. 707-T. (1), dated 11th May, 1931, a copy of which I enclose.

2. I am to ask if you will be good enough to assist the Board by furnishing the following information:—

(i) The total quantities and values of electric wires and cables purchased during each of the past 5 years—

- (a) in India,
- (b) abroad,

(ii) recent prices paid for electric wires and cables purchased—

- (a) in India,
- (b) abroad.

In the case of imported wires and cables I am to ask that, if possible, the price may be shown under the separate headings, *c.i.f.*, landing charges, duty, freight to destination.

3. I am also to say that the Board would be glad to have an expression of your opinion of the wires and cables manufactured by the Indian Cable Company, Limited, as compared with imported wires and cables as regards quality and price. The Board would be glad if the reply to this letter could be sent not later than July 4th.

(2) *Letter No. K.-61 (1), dated the 24th June, 1931, from the Chief Controller of Stores, Simla.*

With reference to your letter No. 310/C-9, dated the 1st June, and in continuation of my letter No. K.-61 (19), dated the 9th June, I have the honour to forward herewith a statement "A" showing the total quantities and values of electric wires and cables purchased by this office during the past five years. The quantities and values of electric cables and wires of Indian and foreign manufacture have been shown separately. In addition to this certain small purchases were also effected by the Provincial Purchase Circles of the Department.

I regret that this statement may be of little help to your Board as it only shows the purchases made by this office and does not include purchases made direct by certain using Departments of the Central and Provincial Departments. This Department has no information regarding the quantities and values of electric wires and cables other than those actually dealt with against indents received from using Departments.

Your Board is no doubt aware that in many cases contracts are placed for complete electrical installations in Government buildings, the contractors being responsible for the supply of all electric cables and wires required for the work entrusted to them and any statement of the actual purchases of electric cables made by Government Departments will not, therefore, be a complete record of the actual quantity of cable used for Government purposes. I am unable to give any estimate of the quantities of cables used by wiring contractors on installation in Government buildings.

With regard to part (ii) of paragraph 2 of your letter, I enclose herewith copies of contracts entered into by this Department for the supply of electric wires and cables during the years 1929-30, 1930-31 and 1931-32 and I trust you will be able to obtain from these documents all the information regarding prices which you require.

I invite your particular attention to the Rate Contracts for 1931-32, from which you will observe that the names of contractors included in these contracts are:—

Messrs. The Indian Cable Company, Limited, Messrs. W. T. Henley's Telegraph Works Company, Limited, and Messrs. J. C. Karaka and Company, Bombay.

Messrs. W. T. Henley's Telegraph Works Company, Limited, are one of the highest class cable manufacturers in England and Messrs. Karaka and Company, Bombay, are representatives of Messrs. The Deutsche Kabelwerke Aktiengesellschaft of Berlin, a well known cable manufacturing concern in Germany.

Messrs. Henley's Telegraph Works Company, Limited, are members of the Cable Manufacturers Association, and I have been given to understand that there is a working arrangement in regard to prices between the principal members of this Association and Messrs. The Indian Cable Company, Limited. I have no doubt your Board will make enquiries into this point when considering the Indian Cable Company's representation. So far as I am aware, no such arrangement exists between the Indian Cable Company and Messrs. J. C. Karaka and Company.

I regret I am not able to analyse the prices given in the contracts into their component parts, *e.g.*, *c.i.f.* value, landing charges, etc., as all our

contracts are for f.o.r. delivery at different stations, but as the prices given in the contracts are all on a comparative basis, I hope the information now furnished will meet the requirements of your Board.

With regard to the request for an expression of my opinion on the wires and cables manufactured by the Indian Cable Company, I may explain for the information of the Board that this Department has entered into an arrangement with the Company under which the Metallurgical Inspector tests and certifies all wires and cables manufactured by the Company which are required to comply with any particular specification. This arrangement was agreed to in order to assist the Company in their endeavours to dispose of their products and also to give using departments an assurance that only wires and cables complying with specifications were supplied against their demands.

My general opinion in regard to the quality of the cables manufactured by the Indian Cable Company, Limited, is that in all essential respects they compare not unfavourably with similar wires and cables imported from abroad. Defects have been found from time to time in supplies made against this department's demands, but these have as a rule been due to errors in manufacture which the Company have been able to rectify. The one respect in which I consider they are in a general way inferior to the best quality of cable manufactured by firms in the Cable Makers Association in Britain is in the outside finish of the V. I. R. braided cables. Owing to the climatic conditions in India the Company have not hitherto been able to obtain as hard a finish of the waterproofing outside compounding on their V. I. R. braided cables as can be obtained by manufacturers abroad.

It may prevent misunderstanding if I make it clear that I have excluded from the statement all hard drawn copper wire, copper weld wire and other classes of bare conductors which are produced by the Company. Information regarding these classes of manufacture can be furnished if required.

#### STATEMENT A.

*Statement showing quantities and values of Rubber Insulated cables and wires purchased.*

Year.	IMPORTED.		INDIAN MADE.*	
	Quantity.	Value.	Quantity.	Value.
	Yds.	Rs.	Yds.	Rs.
1926-27 . . . . .	745,400	89,391	64,900	6,967
1927-28 . . . . .	575,070	32,045	79,800	21,371
1928-29 . . . . .	290,300	78,462	1,036,450	1,34,399
1929-30 . . . . .	288,182	74,437	799,126	2,65,687
1930-31 . . . . .	320,767	91,998	428,146	1,71,874

\* Manufactured by Messrs. The Indian Cable Co.

(3) Letter No. 401, dated the 3rd July, 1931, from the Secretary, Tariff Board, to the Chief Controller of Stores, Simla.

I have the honour to acknowledge with thanks receipt of your letter No. K-G. (1), dated the 24th June, 1931, together with its enclosures. With reference to the last paragraph of your letter I am to say that the Board would be grateful if you would supply information regarding all classes of bare conductors also with reference to the points raised in my letter No. 310/C-9, dated the 1st June 1931. The reply to this letter may be addressed to me at 1, Council House Street, Calcutta.

## (4) Letter dated Simla, the 29th July, 1931, from the Chief Controller of Stores.

With reference to your letter No. 401/C.-9, dated the 3rd July, 1931, I have the honour to forward herewith:—

- (i) a statement A showing the total quantities and values separately of Indian made and imported bare conductors purchased by this Department for the past five years. In addition to this certain small purchases were also effected by the Provincial Purchase Circles of this Department;
- (ii) an abstract (marked B) of all the quotations received in November 1930, against this Department's advertised tender for the Annual rate contract for the period commencing from the 15th January, 1931, to the 14th January, 1932. A printed copy of the said contract No. N.-11795, dated the 15th December 1930, entered into with the Indian Cable Co., Ltd., is also attached;
- (iii) a statement (marked C) showing comparison between the prices of the Indian Cable Co., Ltd., and the lowest satisfactory quotations from Importers submitted against tenders called for by this Department for the Indian Telegraph Department requirements, from May, 1930 to February, 1931.

Statement C will show the measure of preference given to the Indian Cable Co., Ltd.

My general opinion with regard to the bare copper wires manufactured by the Indian Cable Co. is that in every respect they are as good as those manufactured abroad by firms of repute.

## A.—Statement showing quantities and values of copper conductors purchased.

Year.	Indian Made.		Imported.		Value.
	Quantity.	Value.	Quantity.	Value.	
	Cwts. lbs.	Rs.	Cwts. lbs.	Rs.	
1926-27	1,023 86	60,296	781 48	49,718	
1927-28	903 9	57,141	71 101	4,163	
1928-29	758 50	57,368	34 82	2,079	
1929-30	14,319 81	10,78,778	499 72	82,687	
1930-31	7,281 37	4,05,875	969 24	1,41,880	

## B.—Comparative statement showing price per cwt. at port towns in India, of bare copper wire in response to advertised tender No. N.-11795 for Annual Rate Contract for the period 15th January, 1931, to the 14th January, 1932. Tenders were opened on the 14th November, 1930. Contract placed with Messrs. The Indian Cable Co., Ltd., Calcutta, on the 15th December, 1930.

Size of Conductors.	Messrs. British	Messrs. W. T.	Messrs. Indian
	Insulated Cable Co.'s quotation.	Henley Telegraph Works Co.'s quotation.	Cable Co.'s quotation.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
10 S. W. G.	41 10 6	41 10 6	41 10 6
9 "	44 12 6	44 13 0	44 13 6
8 "	41 10 6	41 10 6	41 10 6
7 "	47 9 6	47 10 0	47 10 6
6 "	44 13 6	44 13 6	44 13 6
5 "	46 10 6	46 10 3	46 10 6
4 "	44 9 6	44 9 6	44 9 6
3 "	46 2 3	46 2 6	46 2 6

Size of Conductors.	Messrs. British Insulated Cable Co.'s quotation.	Messrs. W. T. Henley Telegraph Works Co.'s quotation.	Messrs. Indian Cable Co.'s quotation.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
2 S. W. G. . . . .	44 2 6	44 2 6	44 2 6
1 " . . . . .	43 10 6	43 10 3	43 10 6
0 " . . . . .	46 0 0	44 12 6	44 12 6
00 " . . . . .	47 0 0	46 8 0	46 8 0
000 " . . . . .	50 0 0	48 9 6	48 9 6
0000 " . . . . .	50 0 0	48 9 6	48 9 6
Extra per cwt. for above wires if sup- plied on $\frac{1}{4}$ ton, 1 ton and 2 tons drums . . . . .	4 8 0	4 8 0	4 8 0

NOTES (1).—The above prices are based on a rate of £47 per ton for electrolytic wire bars and are subject to adjustment according to the wire bar rate ruling on the day on which any particular order is received by the contractor.

(2) Copy of Rate Contract No. N.-11795, dated the 15th December, 1930, is attached.

GOVERNMENT OF INDIA.

INDIAN STORES DEPARTMENT.

*Annual Rate Contract No. N.-11795, for Wire, Copper, Solid, Bare, Hard Drawn, High Conductivity, from the 15th January, 1931, to the 14th January, 1932.*

1. *Contractors.*—Messrs. The Indian Cable Co., Ltd., Post Box 514, Calcutta.

*Telegraphic Address.*—Cableco.  
*Agents at—*

Madras.—Messrs. Gillanders Arbuthnot & Co., 1st Line Beach.

Bombay.—Messrs. Gillanders Arbuthnot & Co., Hong Kong Bank Buildings, Church Street.

Karachi.—Messrs. Gillanders Arbuthnot & Co., Lloyds Bank Buildings.

2. *Number and date of the Contract.*—N.-11795, dated the 15th December, 1930.

3. *Period covered by the Contract.*—The Contract shall remain in force for a period of one year from the 15th January, 1931 to the 14th January, 1932.

4. *Inspection.*—Stores will be inspected before despatch as follows:—  
Despatches from— To be inspected by—

(1) Firm's Works at Tata-  
nagar.

The Metallurgical Inspector, I. S. D.,  
Tatanagar.

(2) Calcutta . . . . . The Controller of Inspection, 6, Esplanade  
East, Calcutta.

(3) Bombay . . . . . The Controller of Inspection, Hararwala  
Building, Wittet Road, Ballard Estate,  
Bombay.

(4) Karachi . . . . . The Assistant Controller of Inspection,  
Artillery Maidan, Karachi.

(5) Madras . . . . . The Inspector-in-charge, I.S.D., High Court  
Buildings, Madras.

The Inspecting Officer will be informed by the firm when and where the goods will be ready for inspection. No supply will be made unless it is inspected by an officer of the Indian Stores Department before despatch, except in the case of supplies to Factories—*vide* Nos. 29 to 38 mentioned in clause 5 below, the inspection of which will be carried out by the consignees concerned after receipt at destination.

5. *Direct Demanding Officers.*—The following officers are authorised to indent direct against this rate contract:—

- (1) The Chief Engineers of Commands, M. E. S.
- (2) The Commanders, Royal Engineers of Districts and Independent Brigade Areas.
- (3) The Assistant Commander, Royal Engineers, Northern Command Park, Lahore Cantonment.
- (4) The Officer-in-charge, Reserve Engineer Stores, Lahore Cantonment.
- (5) The Controller of Stores, N. W. Railway, Lahore.
- (6) The Controller of Stores, G. I. P. Railway, Bombay.
- (7) The Controller of Stores, E. I. Railway, Calcutta.
- (8) The Controller of Stores, E. B. Railway, Calcutta.
- (9) The Controller of Stores, Jodhpur Railway, Jodhpur.
- (10) The Superintendent of Stores, Burma Railways, Rangoon.
- (11) The Superintendent of Stores, Assam-Bengal Railway Co., Ltd., Pahartali.
- (12) The Superintendent of Stores, South Indian Railway Co., Ltd., Negapatam.
- (13) The Controller of Stores, M. and S. M. Railway Co., Ltd., Perambur.
- (14) The Electrical Engineer, P. W. Department, Madras.
- (15) The Executive Electrical Engineer, B. and R. Electrical Division, Punjab, Lahore.
- (16) The Superintending Engineer, Electrical and Mechanical, P. W. Department, New Delhi.
- (17) The Electrical Engineer and Electric Inspector, Bihar and Orissa, Patna.
- (18) The Executive Engineer, 3rd Project Division, P. W. Department, New Delhi.
- (19) The Executive Engineer, 7th Project Division, P. W. Department, New Delhi.
- (20) The Executive Engineer, Simla Central Division, Simla.
- (21) The Executive Engineer, Workshop and Machinery Division, Cauvery Metur Project, Metur Project P. O.
- (22) The Executive Engineer, Electrical Division, P. W. Department, Bombay.
- (23) The Sub-Divisional Officer-in-charge, General Stores, Cauvery Metur Project, Metur Project P. O.
- (24) The Controller of Telegraph Stores, Alipore, Calcutta.
- (25) The Master, Security Printing, India, Nasik Road.
- (26) The Superintendent of Stores, P. W. Department, Rangoon.
- (27) The Master of Mint, Calcutta.

- (28) The Principal, Engineering College, Sibpur, Howrah.
- (29) The Superintendent, Metal and Steel Factory, Ishapore.
- (30) The Superintendent, Gun and Carriage Factory, Jubbulpore.
- (31) The Superintendent, Ammunition Factory, Kirkee.
- (32) The Superintendent, Cordite Factory, Aruvankadu.
- (33) The Superintendent, Rifle Factory, Ishapore.
- (34) The Superintendent, Gun and Shell Factory, Cossipore.
- (35) The Superintendent, Harness and Saddlery Factory, Cawnpore.
- (36) The Superintendent of Manufacture, Clothing Factory, Shahjahanpur.
- (37) The Ordnance Officer, Clothing Factory, Madras.
- (38) The Officer-in-Charge, Assembly Factory, Rawalpindi.
- (39) The Superintendent, Viceregal Estates, Simla/New Delhi.
- (40) The General Superintendent, Public Works Workshops and Stores, Madras.
- (41) The Managing Director, Opium Factory, Ghazipur.

The above-mentioned officers and such other officers as may be authorised in writing by the Chief Controller of Stores, Indian Stores Department (Engineering Section), Simla/New Delhi, to indent direct will place orders direct on the firm or on their branches or Agents for wires required by an ordinary letter or requisition quoting the number and date of this rate contract. They will also endorse copies of such letters or requisitions (1) to the Audit Officer, Indian Stores Department, New Delhi, and (2) two copies to the Inspecting Officer concerned, *vide* clause 4 above.

6. *Other Indenting Officers.*—Other Indenting Officers will send indents on the prescribed I. S. D. form to the Chief Controller of Stores, Indian Stores Department (Engineering Section), Simla/New Delhi, or to the nearest Purchasing Officer of this Department, *viz.* :—

- (1) The Controller of Purchase, 6, Esplanade East, Calcutta,
- (2) The Controller of Purchase, Hararwala Building, Wittet Road, Ballard Estate, Bombay,
- (3) The Controller of Purchase, Artillery Maidan, Karachi,

who will place orders, with despatch instructions on the firm.

7. In the case of bills for supplies made in compliance with demands received from direct demanding officers the number and date of this rate contract and the demanding officers' demand number and date will be quoted by the firm.

In the case of bills for orders placed by the Chief Controller of Stores, Indian Stores Department (Engineering Section), Simla/New Delhi, or by the Provincial Purchase Offices, the number and date of the specific order issued by the Chief Controller of Stores, Indian Stores Department, Simla/New Delhi or by the Provincial Purchase Office (not the number and date of this contract) will be quoted by the firm.

8. The value of demands placed direct on the firm by the direct demanding officers should not exceed Rs. 10,000 in any one case. Any demand exceeding Rs. 10,000 in value should be sent to the Chief Controller of Stores, Indian Stores Department, Simla/New Delhi, for compliance.

9. Direct demanding officers are only permitted to operate against this contract on the distinct understanding that all bills must be passed on to the Audit Officer, Indian Stores Department, New Delhi, with the least possible delay.

10. Requisitions against this contract should be expressed in the same units as appear in the contract.

Schedule of prices of Wire, Copper, Bare, Solid, Hard Drawn, High Conductivity, on contract with Messrs. The Indian Cable Co., Ltd., Calcutta.

Item No.	Description.	Unit.	Rate per unit		Approx. length per coil of wire.	Guaranteed stock quantity to meet Casual demands.				
			F. O. R. Calcutta, Bombay, Karachi, Madras, Rangoon, and Tata-nagar.	Minimum weight per coil of wire.		Calcutta.	Bombay.	Madras.	Karachi.	Rangoon.
			Rs. A. P.	Lbs.	Yds.	Tons.	Tons.	Tons.	Tons.	
	Indian Cable Company's Hard Drawn High Conductivity, Bare, Solid, Copper Conductors conforming to I. S. D. Specification No. H.-56-B.									
	Standard Nominal Size. Area.									
1	-012875 sq. in. equivalent to 10 S. W. G.	Per cwt.	41 10 6	120	873-6	6	3	2	4	Orders for delivery in the Rangoon territory will be compiled with ex-Calcutta stock.
2	-01629 sq. in. equivalent to 9 S. W. G.	"	44 13 6	120	637-8	2	1	1	1	
3	-02061 sq. in. equivalent to 8 S. W. G.	"	41 10 6	120	516-1	6	3	2	4	
4	-025 sq. in. equivalent to 7 S. W. G.	"	47 10 6	120	426-6	2	1	1	1	
5	-02926 sq. in. equivalent to 6 S. W. G.	"	44 13 6	120	358-4	5	3	1	3	
6	-03631 sq. in. equivalent to 5 S. W. G.	"	46 10 6	120	294-4	5	3	1	1	
7	-04227 sq. in. equivalent to 4 S. W. G.	"	44 9 6	360	736-5	6	3	2	3	
8	-05 sq. in. equivalent to 3 S. W. G.	"	46 2 6	360	624-2	3	2	1	2	
9	-05983 sq. in. equivalent to 2 S. W. G.	"	44 2 6	360	520-4	6	3	2	2	
10	-07069 sq. in. equivalent to 1 S. W. G.	"	43 10 6	360	440-6	6	3	2	1 1/2	
11	-0825 sq. in. equivalent to 0 S. W. G.	"	44 12 6	360	377-7	3	1	1	2	
12	-095 sq. in. equivalent to 00 S. W. G.	"	46 8 0	360	327-3	5	1	1	1	
13	-109 sq. in. equivalent to 000 S. W. G.	"	48 9 6	360	286-4	2	1	1	2	
14	-126 sq. in. equivalent to 0000 S. W. G.	"	48 9 6	360	247-7	1	1	1	1	
15	Extra per cwt. for above wires if supplied on 1/2 ton, 1 ton and 2-ton drums.	"	4 9 0	..	..	..	..	..	..	

NOTE.—F. O. R. Calcutta and Bombay rates include free delivery by road, within a radius of six miles from the firm's stores.

Makers.—Indian Cable Co., Ltd., Calcutta.

Specification.—The above wires shall comply with I. S. D. Specification No. H.-56-B.



*Packing.*—The conductors shall normally be supplied packed in gunny in coils of longest manufacturing lengths.

*Delivery.*—In addition to stocks shown herein considerable quantities of each size shall be available from contractor's works at Tatanagar in 2-3 days from date of receipt of an order.

Wire on drums (*vide* item 15 above) shall be supplied from contractor's works at Tatanagar only.

*Prices.*—(a) The prices of bare copper conductors as detailed in the Schedule are based on an electrolytic wire bars rate of £47 per ton and are subject to adjustment in accordance with the wire bar rate ruling as given in Messrs. Bagot and Thomson's Daily Commercial Report for the day on which the order is received by the contractor but no adjustment of price shall be made unless the rate of electrolytic wire bars has risen or fallen by more than ten shillings above or below the basic rate of £47 per ton.

(b) The method of adjustment shall be as follows:—If the wire bar rate rises or drops in price by more than ten shillings per ton then the price will be based on the next £1 higher or lower per ton. The price per cwt. shall vary by annas ten pies eight per each £1 per ton that the E. W. B. rate rises or falls.

*Example.*—Between £46-10 and £47-10 per ton for electrolytic wire bars the rate per cwt. would remain unchanged. With electrolytic wire bars at £47-11 per ton the basis would be £48 (*i.e.*, there would be an increase in price of annas ten pies eight per cwt.). Similarly if the E. W. B. rate is £46-9 the basis would be £46 corresponding to decrease in the price of annas ten pies eight per cwt.

#### *Conditions of Contract.*

1. *Definition.*—The term "Inspector" means an Inspecting Officer appointed by the Secretary of State for India in Council (hereinafter called the Purchaser). The term "Contractor" means the person, firm or company with whom the order for the supply has been placed. The term "Sub-Contractor" means any person, firm or company from whom the Contractor may obtain any materials or fittings to be used in the supply or manufacture of the stores.

2. The contract shall be deemed to be a "Rate Contract" for the supply of the Stores of the descriptions set forth in the Schedule hereto annexed during the period therein specified. No guarantee can be given as to the number or quantity of the stores which will be ordered during the period of the contract, but the purchaser undertakes to order from the Contractor all stores as detailed in the schedule which he requires to purchase except that he reserves to himself the right (1) of submitting to competition any supply of the article included in the Contract the value of which is estimated to exceed Rs. 10,000, and (2) of placing the contract with one or more contractors as he may think fit.

3. *Delivery.*—The Contractor shall as may be required by the Purchaser either deliver free at, or despatch f.o.r. from the place or places specified in the said Schedule, such numbers or quantities of the stores detailed in the said Schedule as may be ordered direct from the Contractor from time to time by the Purchaser or any officer (hereinafter called the Indentor) who may at any time during the period of the contract be authorised by him to place such orders. The Contractor shall deliver or despatch the full quantity of the stores so ordered within the period specified in the said Schedule.

4. *Specifications, etc.*—When tenders are called for in accordance with a specification, drawing or sealed pattern, the Contractor's tender to supply in accordance with such specification, drawing or sealed pattern shall be deemed to be an admission on his part that he has fully acquainted himself with the details thereof and no claim on his part which may arise

on account of his insufficient examination of the said specification, drawing or sealed pattern, will, in any circumstances, be considered.

5. If any dimensions figured upon a drawing differ from those obtained by scaling the drawing the dimensions as figured upon the drawing are to be taken as correct.

6. *Inspection and tests.*—Notice in writing shall be sent by the Contractor to the Inspector when the stores to be supplied are ready for inspection and test. No work or supply shall be considered complete in accordance with the terms of this contract until the Inspector shall have certified in writing that such work or supply has been inspected and approved by him.

7. The Contractor shall provide without any extra charge all materials, tools, labour and assistance of every kind which the Inspector may consider necessary for any test or examination which he may require to be made on the Contractor's premises and shall pay all costs attendant thereon. The Contractor shall also provide and deliver free of charge at such place as the Inspector may direct such materials as he may require for test by chemical analysis or independent testing machine. The cost of any such tests will be defrayed by the purchaser provided that the results of the tests are satisfactory and in accordance with the terms of the order or contract. In the event of such tests being unsatisfactory in this respect, and resulting in or leading to the rejection of the supplies concerned, the cost of the tests will be borne by the Contractor. The Inspector shall have the right to put all articles or materials to such tests as he may think proper for the purpose of ascertaining whether the same are in accordance with the specification, drawing or sealed pattern mentioned in the tender and to extract such samples as may be necessary for such purpose. The quantity so extracted shall be replaced by the contractor free of charge.

8. The whole contract is to be executed in the most approved and workmanlike manner to the satisfaction of the Inspector who, both personally and by any deputy appointed by the Purchaser or the Inspector in this behalf, shall have full power at every stage of progress to inspect the manufacture of the stores or any part thereof at such times as he may deem fit and to reject any of the stores of which he may disapprove; and his decision thereon and on any question the true intent and meaning of the specification or drawings or of the work necessary for the proper completion of the contract shall be final and conclusive.

9. The Contractor is to be entirely responsible for the execution of the contract in all respects in accordance with the conditions of contract, notwithstanding any approval which the Inspector may have given of materials or other parts of the work involved in the contract or of tests carried out either by the Contractor or by the Inspector.

10. *Charges for work necessary for completion of contract.*—The Contractor shall pay all charges for handling, stamping, painting, marking protecting and preserving, patent rights, drawings, templates, models and gauges and for all such measures as the Inspector may deem necessary for the proper completion of the contract, though special provision therefor may not be made in the specification or drawings.

*Indemnity clause.*—The Contractor shall at all times indemnify the Buyer against all claims which may be made in respect of the said stores under any patent rights and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfilment of the contract: PROVIDED ALWAYS that in the event of any claim in respect of alleged breach of Letters Patent being made against the Purchaser he shall notify the Contractor of same, and the Contractor shall be at liberty, but at his own expense, to conduct negotiations for settlement or any litigation that may arise therefrom.

11. *Packing materials.*—All packing cases, containers, packing and other similar materials shall be supplied free by the Contractor and will not

be returned. Every bale or package shall be clearly marked with the Contractor's name, consignee's name and address, and the gross weight and shall contain a packing note showing its contents in detail. The Contractor will be held responsible for stores being sufficiently and properly packed so as to ensure their safe arrival at their destination.

12. *Freight.*—Unless other instructions are received from the Purchaser or the Indentor the stores shall be despatched at public Tariff rates and not at Government concession rates.

13. *Notification of delivery or despatch.*—Notification of delivery or despatch in regard to each and every consignment shall be made to the consignee, the indentor and the Inspecting Officer concerned of the Indian Stores Department, immediately after despatch or delivery. The Contractor shall further supply to the consignee a priced invoice and Packing Account of all stores delivered or despatched. All packages, containers, bundle and loose materials forming part of each and every consignment shall be described fully in the packing account, and full details of contents of packages and quantity of materials are to be given to enable the consignee to check the stores on arrival at destination.

14. *Time for and rate of delivery or despatch the essence of the contract.*—The time for and rate of delivery or despatch stipulated in the said schedule shall be deemed to be of the essence of the contract, and should the Contractor fail to deliver or despatch any consignment within the period prescribed for such delivery or despatch in the said schedule, the Purchaser shall be entitled to recover from the Contractor a sum of 2 per cent. of the contract price of such consignment for each and every month or part of a month during which the supply or despatch of such consignment may be in arrears, or alternatively at the option of the Purchaser the Purchaser shall be entitled to purchase such consignment elsewhere on the account and at the risk of the Contractor or to cancel the contract, and the Contractor shall be liable for any loss or damage which the Purchaser may sustain by reason of such failure on the part of the Contractor.

If such failure as aforesaid shall have arisen from any cause which the Purchaser may admit as reasonable ground for an extension of time, the Purchaser will allow such additional time as he considers to be justified by the circumstances of the case, and will forego the whole or such part as he may consider reasonable of his claim for any such loss or damage as aforesaid. Any failure or delay on the part of Sub-Contractor though their employment may have been sanctioned under clause 16 hereof, shall not be admitted as a reasonable ground for any extension of time or for exempting the Contractor from liability for any such loss or damage as aforesaid.

15. *Removal of rejections.*—Any stores delivered for inspection at the Purchaser's Depôt and rejected by the Inspector must be removed by the Contractor within a fortnight from the date of rejection. Such rejected stores shall lie at the Contractor's risk from the date of such rejection. If not removed within a fortnight of rejection the consignee shall have the right to dispose of such stores as he thinks fit at the Contractor's risk and on his account.

16. *Sub-letting of contract.*—The Contractor shall not sublet or assign this contract or any part thereof without the written permission of the Purchaser. In the event of the Contractor's sub-letting or assigning this contract or any part thereof without such permission the Purchaser shall be entitled to cancel the contract and to purchase the stores elsewhere on the Contractor's account and risk and the Contractor shall be liable for any loss or damage which the Purchaser may sustain in consequence or arising out of such repurchase.

17. *Bribes, Commission, etc.*—Any bribe, commission, gift or advantage given, promised or offered by or on behalf of the Contractor or his partner, agent or servant or any one on his or their behalf to any officer, servant, representative or agent of the Purchaser or the Government of India

or any person on his or their behalf in relation to the obtaining or to the execution of this or any other contract with the Purchaser shall, in addition to any criminal liability which he may incur, subject the Contractor to the cancellation of this and all other contracts and also to payment of any loss or damage resulting from any such cancellation to the like extent as is provided in cases of cancellation under clause 14 hereof. And the Purchaser shall be entitled to deduct the amounts so payable from any moneys otherwise due to the Contractor under this or any other contract. Any question or dispute as to the commission of any offence under the present clause shall be settled by the Chief Controller of Stores, Indian Stores Department, in such manner and on such evidence or information as he shall think fit and sufficient, and his decision shall be final and conclusive.

18. *System of payment.*—Unless otherwise agreed between the Purchaser and the Contractor payment for the stores will be made by the Audit Officer, Indian Stores Department, as follows:—

100 per cent. of the contract price will be paid after inspection on receipt of the consignment in good order by the consignee.

19. *Laws governing the contract.*—This contract shall be governed by the Laws of British India for the time being in force.

20. *Arbitration.*—In the event of any question or dispute arising under these conditions or in connection with this contract (except as to any matters the decision of which is specially provided for by these conditions) the same shall be referred to the award of an arbitrator to be nominated by the Chief Controller of Stores, Indian Stores Department, and an arbitrator to be nominated by the Contractor, or in the case of the said arbitrators not agreeing then to the award of an umpire to be appointed by the arbitrators in writing before proceeding on the reference and the decision of the arbitrators, or, in the event of their not agreeing, of the umpire appointed by them shall be final and conclusive and the provisions of the Indian Arbitration Act, 1889, and of the Rules thereunder and any statutory modification thereof shall be deemed to apply to and be incorporated in this contract.

*Special Condition of Contract.*

The Bare Copper Conductors shall normally be supplied packed in gunny in coils of longest manufacturing lengths.

Statement showing quotations for Messrs. The Indian Cable Co.'s bare Copper Wire and the lowest satisfactory quotations for imported wire received in response to tenders called for by the Indian Stores Department for bare Copper Wire for the Indian Telegraph Department, from May 1930 to February 1931.

Serial No.	Description of copper wire.	Tender No. opened on	Quantity ordered.	Messrs. Indian Cable Co.'s quotation.	Lowest satisfactory quotation from Importers.	Orders placed with
1	Wire copper, Hard drawn, 400 lbs. per mile.	N-11207, dated 31st May 1930.	95½ tons	(a) Rs. 1,095 per ton  (b) Rs. 1,075 per ton  (a) For Free delivery at  (b) F.o.r. Tatanagar.	Rs. 1,010 per ton (Messrs. A. E. G. Indian Electric Co., Ltd., Bombay).  Telegraph Stores, Calcutta.	Order placed on 6th June 1930 with Messrs. Indian Cable Co., Ltd., at Rs. 1,075 per ton <i>f.o.r.</i> Tatanagar.
2	Wire copper, Hard drawn, 200 lbs. per mile.	N-11568/89, dated 31st July 1930.	100 tons	Rs. 1,065 per ton (original quotation).  Free delivery at	Rs. 952 per ton (Messrs. Russa Engineering Works, Ltd., Calcutta).  Telegraph Stores, Calcutta.	Order placed with Messrs. Indian Cable Co., Ltd., on the 5th November 1930 at Rs. 1,004 per ton delivered free at Telegraph Stores, Calcutta, against a fresh quotation called for on the 23rd October 1930 owing to the original contractor having failed to supply wire according to specification.
3	Wire copper, Hard drawn— (i) 150 lbs. per mile	N-11914, dated 18th November 1930.	4 tons	Rs. 1,006 per ton	Rs. 982 per ton (Messrs. Russa Engineering Works, Ltd., Calcutta).	Order placed on the 20th November 1930 with Messrs. Indian Cable Co., Ltd., Calcutta.

Serial No.	Description of copper wire.	Tender No. opened on	Quantity ordered.	Messrs. Indian Cable Co.'s quotation.	Lowest satisfactory quotation from Importers.	Orders placed with
3	Wire copper Hard drawn—contd. (II) 200 lbs. per mile . . .	N-11914, dated 18th November 1920.	27 tons	Rs. 991 per ton .	Rs. 965 per ton (Messrs. The General Electric Co. (India), Ltd., Calcutta.	Order placed on the 20th November 1930 with Messrs. Indian Cable Co., Ltd., Calcutta.
	(III) 400 lbs. per mile . . .	N-11914, dated 18th November 1930.	11 tons	Rs. 925 per ton .	Rs. 840 per ton (Messrs. The General Electric Co. (India), Ltd., Calcutta.	Order placed on 20th November 1930 with Messrs. Indian Cable Co., Ltd., Calcutta.
4	Copper wire, Hard drawn, 200 lbs. per mile.	N-12110, dated 17th February 1931.	(a) 34 tons for Telegraph Stores, Bombay.	Free delivery at Telegraph Stores, Calcutta, for all items (I), (II) and (III).	Rs. 980-10-0 per ton (Messrs. Marker Goldsteane & Co., Bombay).	Orders placed on 28th February 1931 as under :— (a) Trial order for 34 tons of Japanese wire with Messrs. Marker Goldsteane & Co., Bombay.
				Rs. 1,058 per ton .		
				Free delivery at Telegraph Stores, Bombay.		
				Rs. 1,035 per ton .		
(b) 105 tons for Telegraph Stores, Calcutta.	Free delivery at Telegraph Stores, Calcutta.	Rs. 980-10-0 per ton (Messrs. Marker Goldsteane & Co., Bombay).	(b) 105 tons with Messrs. Indian Cable Co., Ltd., Calcutta.			
(c) 40 tons for Telegraph Stores, Karachi.	Free delivery at Telegraph Stores, Karachi.	Rs. 1,001-4-0 per ton (Messrs. Marker Goldsteane & Co., Bombay).	(c) Trial order for 40 tons of German wire with Messrs. A. E. G. India Electric Co., Ltd., Bombay.			
	Total . . . . .	....	179 tons			

**Indian Copper Corporation Limited, Calcutta.**

A.—WRITTEN.

(1) *Letter No. 426/C.-26, dated the 9th July, 1931, from the Tariff Board, to the Indian Copper Corporation, Ltd., Calcutta.*

I am directed to refer to the Government of India, Commerce Department Resolution No. 707-T. (1), dated the 11th May, 1931, a copy of which I enclose for your reference. I am to say that in connection with the enquiry now being conducted by the Board under the above terms of reference the Board addressed the Director, Geological Survey of India, with regard to the supplies available in India of copper suitable for use by the Indian Cable Co. The Director in the course of his replies has stated that the furnace refined copper ingot produced in your mines "assays approximately 99.60 per cent. of copper, whereas electrolytic copper should assay not less than 99.94 per cent. of copper. The copper manufactured by the Indian Copper Corporation is therefore not suitable for the manufacture of electrolytic copper rod". He then quotes from a letter addressed to him by you in which you state that the question of the manufacture of electrolytic copper rod has been considered by you and ruled out on the grounds that it would involve too great capital expenditure and that it would open to you only a comparatively small additional market for your copper. In the enquiry it is now conducting, it is obviously a matter of importance to the Board to know whether the chief primary material in the manufacture of electric cables, namely electrolytic copper, is likely to be available in India at economic prices. I am therefore to ask you to be good enough to furnish the Board with information on the points referred to below.

2. The Indian Cable Co. have stated that the value of their total annual output of electric wires and cables amounts at present to approximately Rs. 19½ lakhs. The value of comparable imported wires and cables for 1930-31 amounts to approximately Rs. 62 lakhs. The annual requirements of copper rod by the Indian Cable Co. at present is 1,060 tons, valued roughly at Rs. 10,15,000; but the Company state that if their factory were to work up to maximum output they would require 3,900 tons of H. D. copper for use as telegraph wire, trolley wire, bare overhead conductors and for all tinned and annealed copper wire for cable manufacture and instrument wires. At present prices they estimate the value of this copper at Rs. 29½ lakhs. On a comparison of the import figures with the figures of production by the Indian Cable Co., it would seem that if the Company were able during the next five years to capture the bulk of the market now held by imported wires and cables their requirements of electrolytic copper rod might work up to an approximate figure of 3,500 tons. I am to ask if you will be good enough to state whether you would be prepared to manufacture this copper rod if a market such as that indicated above were reasonably assured to you and, if so, what you would consider the minimum market for which you could manufacture it economically. The Board would also like to know what capital expenditure would be necessary should you decide to manufacture electrolytic copper rod and whether you consider you would have difficulty in competing with imported rod at present prices.

3. I am also to refer to another statement quoted by the Director from your letter to him in which you say that you are at present concentrating on increased production in the direction of rolling yellow metal sheets. In this connection the Board would be glad to know what is the maximum capacity of the rolling mill at your works for the manufacture of yellow metal sheets and what you consider to be the available market for your sheets in India at present. According to the Trade Returns the imports into India of copper sheets in 1930-31 are about 157,000 cwts. and of brass, bronze and similar alloy sheets about 5,700 cwts.

4. Finally I am to say that from figures supplied by the Director the Board understands that the estimated copper content of the reserves of ore at the Mosaboni and Dhobani mines does not exceed 24,000 long tons. If this estimate is correct the available supply of copper after meeting the demand for yellow metal sheets will not be sufficient, even if found suitable, to meet the requirements of the Indian Cable Co. for more than a few years. The Board would be glad to receive the views of your Corporation on this aspect of the question also.

5. I am to ask that the reply to this letter should be sent if possible not later than the 30th July. It should be addressed to the Secretary, Indian Tariff Board, 1, Council House Street, Calcutta.

(2) *Letter dated 28th July, 1931, from the Indian Copper Corporation, Ltd.*

We have the honour to acknowledge your letter No. 426/C-26 of the 9th instant, and in reply thereto cannot do better than hand you a letter dated 24th instant from the General Manager of our Principal's Factory.

As requested we are sending five spare copies of this letter and its enclosure.

Trusting that the information will be sufficient and satisfactory to you.

Enclosure.

INDIAN COPPER CORPORATION, LTD.

Ghatsila P. O.,  
Singhbhum District,  
Chota Nagpur,  
24th July, 1931.

Messrs. Gillanders Arbuthnot & Co.,  
P. O. Box No. 174,

Calcutta.

DEAR SIRs,

In reply to letter No. 426/C-26 of the 9th instant from the Secretary of the Tariff Board, I have pleasure in giving the following information in reply to the points referred to in that letter.

(1) The Indian Copper Corporation is not at present in a position to consider the manufacture of copper rod primarily for the reason that the financial position of the Corporation will not permit the expenditure of the large capital sums thereby involved.

(2) In this connection I would desire to point out that when the Indian Copper Corporation commenced production, it was known that the normal consumption of refined copper ingots in India was not sufficient to absorb the whole of the Corporation's output.

An additional outlet for the Corporation's product had therefore to be considered and resolved itself into one of the following alternatives:—

- (a) The installation of a foundry and rolling mill for the manufacture of copper and yellow metal sheet.
- (b) The installation of an electrolytic refinery for the production of electrolytic copper ingot and possibly "black rod".

These questions were considered in detail and the decision to erect a rolling mill was finally adopted for the reason that it appeared to open a larger and more remunerative market for the Corporation's products, and this prediction has I think since been fulfilled.

(3) The main argument for the alternative electrolytic refinery was the assured supply of electrolytic copper for Government Ordnance requirements that would thereby be obtained.

This, very important factor, however, is now practically non-existent, owing to the fact that extensive tests carried out over the last year have



practically convinced the Army authorities that the Corporation's refined copper is as good, if not better, for Ordnance requirements than electrolytic copper.

This may be explained by the fact that Indian Copper Corporation copper is exceptionally free from all impurities except nickel, which impurity has a beneficial rather than a deleterious effect in the manufacture of brass from this copper, although making the copper quite unsuitable for the manufacture of electric cables owing to the bad electrical conductivity of nickel.

(4) It is probably known that the price of electrolytic copper is determined by the recovery of the valuable metals gold and silver in the electrolytic process, and the cost of the electrolytic process is not therefore covered by the difference in market price between fire refined and electrolytic copper.

In other words, the difference in price between the two products is less than the cost of converting fire refined into electrolytic copper.

Unfortunately the copper ore of Singhbhum has a very low gold and silver content and the recovery of these metals would not therefore be sufficient to make the electrolytic process very attractive. It certainly is not as attractive as the conversion of copper into yellow metal sheet.

(5) The second outlet for electrolytic copper, after Ordnance requirements had been filled, was the Indian Cable Co., but in this instance an additional costly installation for the extrusion of "black rod" was necessary before the Corporation's copper could be marketed in a form suitable for the requirements of this customer.

Frankly this additional capital expenditure required to meet a supply that might conceivably fail after a few years was not considered attractive.

(6) We are asked if we would be prepared to manufacture copper rod if an existing market of 1,060 tons per annum rising in five years to approximately 3,500 tons per annum were reasonably assured.

This is a question of course that must be ultimately decided by my Board of Directors in London to whom my recommendations on this question would be forwarded, but the reply must I think depend on the degree of "reasonable assurance" that can be given to justify the expenditure of the very large capital sums that will thereby be involved.

(7) The capital expenditure that is estimated for the purchase, erection and completion of an electrolytic refinery and plant for the manufacture of electrolytic copper rod is £77,000 or say 10 lakhs rupees.

(8) It must however be realised that for the Indian Copper Corporation to consider the installation of an electrolytic refinery at this stage after our rolling mill has been installed is a much more serious matter, in that our present plant throughout, from mine to smelter and including power plant is now working at practically maximum capacity, giving a production of 350 tons of refined copper and 300 tons of yellow metal sheet per month, all of which when the requirements of Ordnance can be filled will be absorbed by the Indian market.

The supply of the new market created by the Indian Cable Co.'s requirements will therefore mean a wholesale expansion of plant, the cost of which it is almost impossible to estimate at this short notice, but would probably be not less than £200,000 or say 26 lakhs rupees.

This sum would cover the increased development of ore reserves that would be called for to meet operations on the increased scale of production.

(9) The minimum market for which electrolytic copper can be manufactured economically is I believe estimated to be not less than 5,000 tons yearly.

In the present instance, however, the increased scale of production would reduce the cost of production of refined copper, which would be to the advantage of the Corporation and an assured market of 3,500 tons per annum would, I think, almost certainly be considered sufficiently remunera-

tive to justify the installation of an electrolytic refinery. The present market offered by the Indian Cable Co. of 1,060 tons per annum would, however, certainly not justify the installation, as depreciation on the electrolytic plant alone would involve a charge of some £5 per ton of electrolytic copper produced.

(10) The question whether the Corporation would have difficulty in competing with imported rod at present prices can be answered briefly to the effect that without the same tariff on imported rod as at present exists on refined copper the question could not be considered, and as will be seen by previous remarks even with the present tariff rate imposed the question is one that is not so remunerative as, for instance, the disposal of increased output in the form of yellow metal sheet.

In this connection also, at present prices which are of course calamitous, it is only the protective tariff which allows the Corporation to continue operations.

(11) The maximum capacity of the rolling mill now installed is a little over 300 tons per month of yellow metal sheet, but small additions to plant are now on order which will probably increase the capacity very shortly to 350 tons per month.

(12) The figures given in the Tariff Board's letter in relation to imports of brass sheets are not understood and the figure of 5,700 cwts. or 285 tons for all alloyed sheets does not even equal the Corporation's *monthly* output of YM Sheet, which is ordinarily absorbed in the Calcutta market alone.

The following figures taken from the monthly Metal Import Circular are probably reasonably accurate and relate to imports for Calcutta and Bombay only, for the year 1929, and do not include the Madras market which the Corporation is already supplying.

*Total Imports of Yellow Metal Sheet.*

Calcutta . . . . .	80,936 cwts.
Bombay . . . . .	128,015 „
	208,951 cwts. or say 10,000 tons.

Official statistics are not at present to hand, but it will I think be found that the normal imports of yellow metal sheet into India amount to approximately 17,000 tons per annum or 340,000 cwts.

We therefore consider there is a very large available market for our sheet in India and it is for this reason that the rolling mill was erected in place of an electrolytic refinery.

(13) The available reserves of ore are criticised as only being sufficient to supply 24,000 tons of copper, which is of course quite insufficient to meet demands for more than a few years.

I would explain however that the development of ore reserves is again a matter of capital expenditure, the extent of which may be estimated on a cost of Rs. 2 per ton of ore developed, which would be equivalent to approximately Rs. 70 per ton of copper. In other words, as a result of an experience with the ore bodies we are working, we find that to develop and place reserves of ore in readiness for mining and removal for treatment, costs Rs. 70 per ton of copper obtainable from these ore reserves.

It must further be realised that only such reserves of ore that are actually blocked out and are definitely known to exist are included in our ore reserve statement. "Possible" and "Probable" ore reserves that are known to exist but by reason of insufficient development cannot be accurately estimated are designedly excluded from our ore reserve statement which is computed on a very conservative basis.

For this reason and from my knowledge of our ore bodies, I have no hesitation whatever in stating that 1,000,000 tons of ore will be obtained as a result of development to date giving an available copper content of say 32,000 tons and the expenditure of a capital sum of Rs.  $2 \times 1,000,000$  or Rs. 20 lakhs, would result in the development of a further similar tonnage of copper.

The existence of "probable ore" could be ascertained more economically by diamond drilling, but in this instance for technical reasons arising from the nature of the ore bodies I would not recommend expenditure on this form of development.

For your information the present policy of the Corporation is to carry on a programme for the development of new ore reserves on a scale equal to the tonnage that is being extracted on the current scale of output.

For financial reasons it is not considered that a more ambitious programme than the above is justified at the present time, but it should certainly be clearly understood that it is only the question of finance that controls this policy.

(14) The Singhbhum copper belt on which this Corporation is operating extends for a length of some 60 miles and from the existence of the very numerous and extensive old workings and slag heaps that exist thereon, it is known that at some time in the past a large and flourishing copper mining industry must have existed.

The Corporation have only just commenced to touch upon these deposits of copper ore, and there can be little or no doubt that it only requires the requisite capital to build up again an equally flourishing industry on a scale sufficient to meet the total demands of India for copper and its alloys in all forms.

The large capital sums involved, however, necessitate the building up of such an industry in slow and progressive steps.

I submit, however, that the results obtained by the Corporation prove that this project is feasible, remunerative and will prove a most important addition to the industries of the country.

The Corporation now provides employment for over 3,000 workmen and has established a new industry in the country with material latent possibilities for expansion in the future.

The establishment of this new industry, it should be noted, is entirely due to the protective tariff that exists on imported copper, as without this protective tariff the project could never have been considered and the necessary capital could never have been forthcoming.

In this connection it has come to our notice that electrolytic copper wire now imported into India free of duty is being converted into ingots and sold in the Indian market in competition with our indigenous product protected by the tariff.

Trade depression has resulted in a serious decline in the consumption of copper in this country and this factor coupled with the competition as stated above is having a serious effect on the Corporation's prosperity.

In earnestly appeal therefore for a protective tariff on imported copper wire as early as possible to prevent the serious situation that is arising from its omittance.

In conclusion, I would state that the location of the Indian Cable Co. in close proximity to the site of our production of copper and its demand for this metal is a matter of deep interest to this Corporation and I think the country as a whole.

It is a matter of regret that their requirements necessitate such capital expenditure as is at present beyond the consideration of this Corporation.

If, however, this question of the necessary capital can be overcome, it would appear that the supply of indigenous copper for the requirements of the Cable Co. must be a matter of vital interest to both concerns.

In this connection I note that the Director, Geological Survey of India, states that "The copper manufactured by the Indian Copper Corporation is therefore not suitable for the manufacture of electrolytic copper rod".

This statement is liable to misconstruction in that Indian Copper Corporation refined copper as at present produced cannot be utilised for the manufacture of copper rod without the intervention of an electrolytic refinery.

The electrolytic refinery would of course permit the Corporation to manufacture from their fire refined copper electrolytic copper, suitable for manufacture into copper rod and it is only a question of capital expenditure for the installation of the necessary plant.

I enclose for your information a copy of our Chairman's speech covering the annual report of the Corporation and its progress during the year ended 31st December, 1930.

#### INDIAN COPPER CORPORATION, LTD.

*Chairman's Speech and Proceedings at the Seventh Ordinary General Meeting held at the Hall of the Institute of Chartered Accountants, Moorgate Place, London, E.C. 2, on Monday, the 15th June, 1931.*

A Representative of the Secretaries (THE ANGLO-ORIENTAL AND GENERAL INVESTMENT TRUST, LTD.) read the Notice convening the Meeting and the Report of the Auditors to the Members.

The CHAIRMAN (SIR GODFREY B. H. FELL, K.C.I.E., C.S.I.) said: Ladies and Gentlemen, Following our usual practice, I propose, if you agree, to take as read the Directors' Report and Accounts for the year ended 31st December, 1930, which have been in your hands for some days.

#### ACCOUNTS.

Dealing first with the Accounts, you will see that at that date the number of Ordinary Shares issued and fully paid was 3,058,454, an increase of 48,125 over the number issued at the close of the previous year. This is accounted for by the conversion, during the year of 55 Debentures of £100 each, at the rate of 875 Ordinary Shares of 2s. each for each £100 Debenture. The Debenture Capital is correspondingly reduced by £5,500, from £285,300 to £279,800. Of the 4,441,546 Ordinary Shares unissued, 1,993,296 are under option at par for a period of three years from February last. I will deal with this matter later.

Development Redemption Reserve, at £10,798, represents the provision made out of last year's profits. Loan Account at £75,000 is £4,000 higher than a year ago. Bank overdraft at £46,558 was fully covered by stocks of refined copper and yellow metal sheet, valued at £78,879. By the 7th April of this year some £40,000 worth of these stocks had been realised. Creditors at £62,686 are higher by £21,223. Apart from current wages, trading accounts and the like, the chief items are Debenture interest, £8,270, since paid, Income Tax Reserve, £18,500, of which £9,000 has since been paid, and amounts due to Directors and the Secretaries.

On the assets side of the Balance Sheet, Mining Rights are practically unchanged at £47,383, a very conservative figure. Buildings, machinery and plant are higher by £43,414, representing expenditure on the Rolling Mill, two new Converters, the Symons Cone Crusher, and minor items, such as electric light installation, wells, roads, drains, etc. Mining development and general expenditure accounts for £239,690, a nett increase over the previous year's figure, after deducting the sum of £8,077 written off, of £5,538. Tools, materials and stores are higher by about £14,000, and stand at £34,730. Stocks on hand are represented by £78,879, as compared with £37,812. Sundry debtors at £15,527 call for no particular comment. Cash at bankers and in hand amounts to £5,135, while Preliminary Expenses, etc., are slightly lower at £49,200.

The Profit and Loss Account shows that the nett proceeds of copper and yellow metal sold, with stocks in hand, valued as before at cost price or price since realised, amounted to £207,583, to which must be added sundry receipts £5,189, and Transfer Fees £125, making a gross total of £212,899.

Operating costs, £130,471, mine administration and general expenditure, £21,469, London Office expenditure, £4,391, Directors' Fees, £2,530, and Interest Charges, £6,645, total altogether £165,508 leaving £47,391 to be carried to the Balance Sheet. A sum of £9,759 was brought in from the previous year's Balance Sheet, and after adding this sum and deducting Debenture interest, £21,390, there is a balance of £35,760 to be disposed of, as compared with £28,635 a year ago.

Our proposals for dealing with this sum are summarised in the Report, and your approval to them will now be asked. Firstly, we propose to write off from mining development and general expenditure £10,067 12s. 9d., made up of two sums—£6,237 17s. 2d., the cost of development ore extracted during the year and sent to the mill, and £3,829 15s. 7d., being the value of surface ore taken from the dump and treated in the mill. Last year we wrote off £8,077 under these two heads, and I am sure that you will approve of the adoption of the same policy for 1930.

Secondly, we propose to write off £5,090 7s. 6d., being the figure at which Preliminary Expenses stand in the Balance Sheet. We hope, as profits increase, to write off by degrees the balance of this dead asset, representing the expenses of issue of shares and debentures, and commissions and discounts thereon.

Thirdly, we propose to transfer £4,201 6s. 6d. to Development Redemption Reserve, bringing that reserve up to £15,000. In future we shall probably not need to add to this reserve, since we have now arranged to debit all mine development, other than exploratory development and major development work, for example, at Dhobani, to current operating costs, while ensuring that current development keeps pace with current extraction. The reserve which has already been built up will, in our opinion, be sufficient to cover the depletion of our reserves since the commencement of operations, and, indeed, if, as we hope, the development now in hand results in large new additions to our ore reserves, we shall be able to utilise this reserve fund as a general reserve, in which will be merged our depreciation reserve. To the latter we propose to transfer £10,000 from this year's balance. This is a relatively small sum, but it must not be forgotten that there is also, if you accept our recommendations, a further reserve of £15,000, and that in the tow years we shall have written off in addition over £18,000 from mining development and general expenditure, and over £5,000 on account of Preliminary Expenses. Considering that 1929 was our first year of operation, that our Rolling Mill was only completed by the middle of 1930, and that there has been a phenomenal fall in the price of copper since early in 1930, I hope you will agree that we are adopting a sufficiently cautious policy in the matter of building up reserves.

The foregoing proposals account for £29,359 6s. 9d., and the balance, £6,400 19s. 3d., we propose to carry forward to the next Account.

#### FINANCE.

Shortly after the close of the year, the Corporation's finances were re-arranged, owing to the necessity of repaying the loan of £75,000. As the result of negotiations carried out by the Secretaries, it was possible to arrange a fresh loan of £75,000 for a period of eighteen months, with the right to call for a further £10,000 if this should be necessary, and the Corporation was therefore placed in a position to discharge the original loan. There were, however, certain conditions attached to the provision of this finance. This included the resignation of the then Directors, and the appointment of a fresh Board; the resignation of the Consulting Engineers.

and the appointment in their place of New Consolidated Gold Fields, Ltd., and the extension of the option on 1,993,296 Ordinary Shares of the Corporation from 31st December, 1931, until 28th February, 1934, at the price of 2s. per share, instead of 2s. 6d. per share.

These conditions were accepted. Of the Board which was responsible for the control of the Corporation's affairs up till the close of the period under review, only Sir William Henry and myself remain. We have appointed Mr. H. C. Porter and Mr. R. Annan to seats on the Board, and I shall presently ask you to ratify these appointments. While I cordially welcome their co-operation, which I feel sure will be very valuable, I should be ungrateful if I did not feel genuine regret at losing the services of Mr. McCarthy, Mr. Henry Taylor, Mr. Lionel Holland, and Lieut.-Colonel Greenly, to all of whom the Corporation is indebted for much good work and sound advice, and all of whom have taken the greatest interest in its fortunes.

I must also take this opportunity of paying a tribute to the excellent services rendered to the Corporation by the late joint Consulting Engineers. Mr. McCarthy has been responsible for the election and ordering of all the plant, and I think that the results achieved, as shown in the General Manager's Report, bear eloquent testimony to the care and judgment which he has displayed. To him also we owe the selection of most of the staff at the mine and at the mill and converter, and here, again, we have good cause to be grateful to him. Mr. Ernest Woakes has not been so intimately concerned with the details of the work, but his knowledge of local conditions and his long experience have proved of real value to us. I feel sure that you will join with my colleagues and myself in expressing our thanks to both these gentlemen for the services which they have rendered.

#### MINING.

Turning now to the progress of the Corporation's mining operations during the year, I would again remind you that the original programme envisaged the treatment of 100,000 short tons of ore in a year. In 1929, which was not a full year, the output from the mine was 80,151 short tons of ore. In 1930, it was 135,616 short tons. The average grade of mine ore treated in 1929 was 2·66 per cent. copper. In 1930 it was 2·86 per cent. The grade of ore improved markedly during the second half of the year, from 2·568 per cent. to 3·144 per cent., and since the close of the period under review has been well above 3 per cent. Your Underground Superintendent, Mr. Cole, is confident that he can maintain it at an average of not less than 3 per cent. The marked improvement in this respect is due in part to the ledger number of stoping faces which have been made available, thus affording a closer control of grade of mine ore, and partly to the installation of the Symons Cone Crushing Plant, which, with a surface picking belt, has proved most satisfactory and has more than justified the expenditure incurred.

The ore reserves have been re-estimated at the close of the year, with the results set out in your Manager's Report, extracts from which accompany the Annual Report. They total 697,146 tons, of 3·208 per cent. copper. The estimated grade is slightly lower than previously estimated, 3·32 per cent., and the tonnage is lower by about 100,000 tons. Considering that development was very limited, and that over 143,000 tons were broken during the year, this figure may be considered satisfactory, representing, as it does, approximately five years' supply at our present scale of production.

The development undertaken during the year, though restricted in scope, gave results which may be regarded as encouraging. The most important points attacked were below the Fifth Level on the South Main Lode, and a drive South on the Third Level of the Western Lode. Since the close of the year, indications have been much more satisfactory. The new Sixth Level is now in ore approximately 5 feet wide and assaying over 4 per cent. copper, and the drive on the Western Lode is giving almost equally good results.

You will no doubt have noticed from Mr. Woakes' Report that the higher values below the Fifth Level, to which he called attention last year, are again a feature of the figures for the current year.

Mr. Woakes' remarks regarding the results of the diamond drilling at Dhobani, an old working some mile and a quarter from the Main Shaft at Mosaboni, will be read with interest. These results fully justify further exploratory development in this promising area.

#### MILL.

In my speech at the last Annual General Meeting, I expressed the anticipation that the installation of a Symons Cone Crusher would reduce the size of ore transmitted to the Hardinge Mills, and thus enable the latter to treat a larger tonnage and reduce the wear and tear on the mills. That anticipation has been realised. The capacity of the ball mills was increased from 8.5 short tons per hour to 9.6, and the tonnage milled represented an average of 11,180 short tons a month. The average extraction increased from 95.73 per cent. to 96.72 per cent., and the over-all recovery, mine and dump ore combined, from 94.8 per cent. to 96.2 per cent., against a prospectus estimate of 90 per cent. The mill produced 12,584 short tons of concentrates of an average copper content of 29.45 per cent., as compared with 7,166 tons of 29.27 per cent. copper in the previous year. Your Directors agree with Mr. Woakes that these results reflect great credit on the Mill Superintendent, Mr. Durling.

In the course of the year, two new 8-foot converters were installed, with excellent results. The production of blister copper was, in December, 1930, 415 short tons, as compared with 275 short tons in December, 1929.

The Refinery was in continuous operation throughout the year, except for two days. It has not yet been tested to full capacity, and can easily handle charges of over 15 long tons. The output of refinery copper amounted to 2,974 long tons, compared with 1,635 long tons in 1929, while the purity was slightly higher at 99.635, and the nickel content lower. You will be glad to note that no complaint has been received regarding the quality of our product, which is in regular demand with His Majesty's Mint and the Indian Railways.

The most important event in the history of the past year was the completion of the Rolling Mill, which was put into operation for the first time in July. Production was necessarily very restricted, while the inevitable adjustments were being made and labour was being trained. In August, the output was 43 long tons of yellow metal sheet; by December it had risen to 251 tons; while the output for the whole period totalled 718 tons. Since the close of the year it has averaged 252 tons a month. With the present equipment, it is safe to say that the Rolling Mill has a capacity of 3,000 long tons of yellow metal sheet a year. You will appreciate how valuable an outlet this Mill affords for the surplus copper produced in the Refinery, in excess of the normal Indian demand, the more so as our sheet has met with a most gratifying reception, and the demand for it is already greater than we can meet. We hope that a slight addition to the plant will enable a still larger output to be reached, and we have no fears as to our ability to dispose of it.

#### GENERAL.

Last year, in commenting on the fall in the world price of copper, I said that we must devote our energies to reducing our costs of production so as to counteract, as far as possible, the lower price obtained for our copper. Since then, the world price has, as you know, fallen still lower. The monthly average price of "best select" in London, which in January and February, 1930, was over £77, had fallen by December to about £48 10s., a reduction of approximately 47 per cent. Our average operating costs in 1930 showed a considerable reduction over the figures for 1929, and this improvement was particularly marked in the second half-year. Since

the close of the year, while, unfortunately, there has been a still further fall in the price of copper, there has been an even more striking reduction in our operating costs.

He would be a rash man who would venture to prophecy regarding the future trend of copper prices, especially in times such as these that we are passing through. The prolonged depression has falsified all anticipations. Until better times return, and consumption is again on the normal upgrade, it is idle to speculate as to the future of the copper mining industry. Taking, however, the long view, there are certain features in the situation which give grounds for a moderate and tempered optimism. In the twenty-nine years, 1901 to 1929, the world's absorption of copper increased from rather over 1,000 million lbs. to just under 4,000 million lbs. a year, an average yearly increase of 5.73 per cent. During the period, the average price of copper f.o.b. refinery was 16.01 cents. per lb. The highest average price was 27.02 cents. a lb. in 1916, and the lowest was 11.626 cents. in 1902. Recently it has been as low as 8½ cents. The consumption of the metal fell away abruptly at the end of 1929, when the U. S. A. experienced the greatest slump in her history. Stocks began to accumulate. The addition to the world stocks during 1930 has been estimated at 100,000 tons, since, although production in that year was about 300,000 tons lower than in 1929, consumption fell off by about 400,000 tons. More recent figures indicate some reduction in world stocks, but we cannot hope for a return to normality until consumption improves.

Copper is not, of course, the only commodity which is waiting for that event to occur. Over-production—or under-consumption—is playing havoc with many industries to-day, and producers are eagerly awaiting signs of the dawn of better times. But there are factors in connection with the copper industry which point to a greatly increased demand, so soon as the world emerges from the present trough of depression. This is essentially an age of electricity, and as the uses of electricity expand, so the consumption of copper is bound to increase. Even taking into account the large increase in production which will result when the rich mines of Northern Rhodesia come into operation, the normal increase of consumption, based upon figures which I have already given, should be sufficient to absorb that production. There is therefore some ground for hope that, over a term of years, we may see the average price of copper considerably better than it is to-day. If so, this Corporation should stand to benefit by the rise, since it is definitely established as a low cost producer and has, in addition, the advantage of a protected market. In this connection, it is interesting to note that the Indian revenue duty on imported copper, in connection with all other commodities which fall within the Indian general tariff, has been increased with effect from the beginning of April from 15 per cent. to 20 per cent.

You will no doubt expect me to say a few words regarding the progress of the Corporation during the present financial year. Figures of output are published monthly. The refinery produced 1,753 long tons of refined copper in the first five months, an average of 351 tons a month, while the output of the Rolling Mill was 1,264 long tons of yellow metal sheet, an average of 252 tons a month. We hope, by the addition of a second scraping machine and a second sheet heating furnace, to increase the output of the Rolling Mill to at least 300 tons a month, for which there is an assured market. The plant and machinery have functioned with smoothness and efficiency. The grade of mine ore averaged over this period over 3.25 per cent. copper. Finally, the operating costs have shown a remarkable reduction, which reflects great credit on your Manager and his staff.

You have no doubt noticed the brief summary of the salient features of the past year's operations, which is contained in the extracts from your General Manager's Report. It indicates progress and improvement in every direction, and these have continued from month to month in the current year. We set out to treat 100,000 tons of ore a year, with an over-all extraction of 84.6 per cent.; in 1929 we treated 82,341 tons with



an over-all extraction of 89.2 per cent.; last year we treated 134,162 tons, with an over-all extraction of 91.1 per cent. We set out to produce 2,870 long tons of refined copper a year. We are now producing at the rate of over 4,000 long tons. Our estimated costs were £41 0s. 6d. per ton; we have greatly reduced that figure.

Finally, the Rolling Mill has proved an unqualified success from the very outset, and our yellow metal sheet has gained universal approval in the Indian markets, just as our refined copper ingots have given general satisfaction.

For these results the Corporation is greatly indebted to the General Manager, Mr. Woakes, the various Heads of Departments, and the whole Staff. Their zeal and keenness could not be exceeded; while the technical ability of the Superintendents has enabled them to cope with and overcome all the difficulties which are bound to arise in the conduct of a new undertaking such as this. With your well-developed mine, your very efficient plant, and a staff of tried worth, it only remains for the world price of copper to improve in order to reap the reward of your enterprise and your patience.

I now beg to move that the Report and Accounts for the year ended 31st December, 1930, be and they are hereby received and adopted.

The Resolution was seconded by Mr. H. C. PORTER and carried unanimously.

The appointments of Mr. H. C. Porter and Mr. Robert Annan as Directors of the Corporation were confirmed.

Messrs. Turquand, Youngs & Co. were re-elected Auditors for the ensuing year.

The proceedings terminated with a vote of thanks to the Directors and the Staff in India.

## INDIAN COPPER CORPORATION.

B.—ORAL.

Evidence of Mr. R. B. WOAKES, recorded at Calcutta, on Monday the 24th August, 1931.

(Dr. L. L. Fermor, Director, Geological Survey of India, was present.)

*President.*—Before I begin the examination, Dr. Fermor, I should like to thank you on behalf of the Board for consenting to be present here this morning to help us in the examination. Mr. Woakes, you are the Manager of the Indian Copper Corporation, Limited?

*Mr. Woakes.*—Yes.

*President.*—The Copper Corporation in its present form was formed in 1924?

*Mr. Woakes.*—Yes.

*President.*—And the plant was erected, I understand, in 1927.

*Mr. Woakes.*—1927 to 1929.

*President.*—When exactly did you start operations?

*Mr. Woakes.*—January, 1929.

*President.*—You didn't produce copper even experimentally before January 1929.

*Mr. Woakes.*—No.

*President.*—The first point on which we should like to get information is the amount of copper which is available in your mines. You have sent us a letter on that point and I should like to have that elaborated a bit. At present am I right in thinking that there is only one mine working?

*Mr. Woakes.*—Yes.

*President.*—That is Mosaboni mine.

*Mr. Woakes.*—Yes.

*President.*—We understand from a letter that we received from the Director of the Geological Survey of India that as estimated in 1930 the total copper ore reserve at the Mosaboni mine was 697,146 short tons, the copper content of it being 3.208 per cent. You have a total copper content in that reserve of 22,364 short tons.

*Mr. Woakes.*—Yes.

*President.*—Besides the Mosaboni mine, diamond drilling has been carried on at Dhobani.

*Mr. Woakes.*—Yes.

*President.*—That is to say preliminary operations have been completed there.

*Mr. Woakes.*—Yes.

*President.*—But the mine itself is not working.

*Mr. Woakes.*—There is no mine at all.

*President.*—Simply the reserve has been located.

*Mr. Woakes.*—Ore bodies have been located.

*President.*—You have formed a definite estimate of the copper ore in the Dhobani area.

*Mr. Woakes.*—Yes.

*President.*—And the estimate is 75,000 short tons and the copper content of that is 4.98 per cent. That gives you a total copper content in that area of 3,750 short tons, is that correct?

*Mr. Woakes.*—Yes.

*President.*—Taking the Mosaboni and Dhobani mine areas, that is to say the reserves which have already been located, you get a total copper content in those two areas of 26,114 short tons.

*Mr. Woakes.*—Yes.

*President.*—Which converted into long tons gives you 22,350. So far the figures are right?

*Mr. Woakes.*—Yes.

*President.*—I want to know up to the end of 1930 the amount of copper which was extracted from the Mosaboni mine.

*Mr. Woakes.*—That is since we started production?

*President.*—Yes. In 1929 the figure that Dr. Fermor gave in his letter was 1,635 long tons:

*Mr. Woakes.*—I haven't got the actual figures. As far as I remember in 1929 we produced 1,600 tons.

*President.*—And in 1930 2,974 long tons.

*Mr. Woakes.*—Just under 3,000 tons. Since then we have produced 350 tons a month.

*President.*—I want to get 1929-30 figures correctly. You say that you produced none at all in 1928.

*Mr. Woakes.*—No.

*President.*—I find here a note by Sir Edwin Pascoe in which he gives a figure. The statement is this. The figures for Singbhum up to and including 1927 are not of much significance, but the production of 1,855 tons in 1928 is an encouraging sign of what may be expected from this area.

*Dr. Fermor.*—Is that ore or copper?

*President.*—That apparently is ore. The copper which is equivalent to that ore is included in your 1929 figure.

*Mr. Woakes.*—There is a certain amount of ore brought up to the surface and not treated. I think that refers to ore hoisted to the surface, but not treated.

*President.*—That was treated subsequently in 1929?

*Mr. Woakes.*—Yes.

*President.*—In the two years 1929 and 1930 you extracted 4,609 tons of copper which gives an average for the two years of somewhere about 200 tons monthly.

*Mr. Woakes.*—Yes.

*President.*—That was in 1929 and 1930. In the current year, 1931 you are producing at the rate of 350 tons monthly?

*Mr. Woakes.*—Yes.

*President.*—That corresponds to a little over 4,000 tons a year.

*Mr. Woakes.*—Yes, that is what we are aiming at.

*President.*—This 4,200 tons represents your maximum capacity of your extraction and smelting plant at the present moment.

*Mr. Woakes.*—Yes. We could possibly get a little more. 4,200 tons we can say however is the limit with existing plant.

*President.*—That is the limit considering the capacity of your extraction plant?

*Mr. Woakes.*—Yes.

*President.*—If we take the yearly extraction at the rate of 4,200 tons, then the ores which have been located at Mosabani and Dhobani together will be exhausted in about 5 years.

*Mr. Woakes.*—Yes.

*President.*—You say in your letter to us that the Singbhum copper belt in which the mines are located is an extensive one which contains possibly further large reserves of copper ore.

*Mr. Woakes.*—It certainly contains. We are only just beginning. Perhaps Dr. Fermor can throw more light on that.

*President.*—From what one has read about this, although the Singbhum copper belt is a fairly extensive belt the ores are on the whole regarded as being rather poor.

*Dr. Fermor.*—No, that is not correct. The average composition of the ore is 3 or 4 per cent. It is a relatively high grade. 1 and 2 per cent. propositions are poor.

*President.*—What is the percentage in the Rhodesian Mines?

*Dr. Fermor.*—The same as Singbhum.

*President.*—Experimental borings were made by the Geological Survey in the Singbhum area by about 1908. Sir Edwin Pascoe gives the results of 12 experimental borings and I find in the case of 9 out of the 12 that the percentage is considerably below 3. There were only three borings which gave you more than 3 per cent. of copper.

*Dr. Fermor.*—I don't remember the figures. Some of them are considerably higher than 3.

*President.*—One of them is about 12. On the whole you will say that the Singbhum copper belt is reasonably rich in copper content.

*Dr. Fermor.*—I would not put it that way. I should say that the evidence such as we have, shows that it is worth working.

*President.*—This is an area where you have got evidence of old working?

*Dr. Fermor.*—Yes, the copper belt extends for 80 miles.

*President.*—Where you have evidence of old workings, is not that some indication that probably at any rate surface deposits and deposits near the surface have been exhausted.

*Dr. Fermor.*—Yes, the deposits are sulphide deposits and the portions of the deposits at the surface were oxidised. The oxidised portions have been removed by the old workers and the sulphide portions have been left.

*President.*—Mr. Woakes, in your letter you say that without any further expenditure on investigation or preliminary operations out of the two areas which are now located, it might be possible for you to get copper ore to the extent of one million tons.

*Mr. Woakes.*—Yes.

*President.*—May we take that as an estimate which will be substantiated?

*Mr. Woakes.*—As regards our reserves, you mentioned up to the end of 1929. Our reserves up to 1930 were again 700,000 tons, although we took away about 100,000 tons. We are keeping our reserve figure constant, because we haven't got the capital to do more than that at present. We should very much like to double that figure.

*President.*—If you want to double it, you have got to undertake drilling operations, preliminary work.

*Mr. Woakes.*—Yes, we have to sink shafts and go down deeper instead of starting again on the surface as in the present mine. It is much cheaper to go down deeper than to start developing new deposits.

*President.*—The estimate of one million tons that you give is what you expect to be the copper ore that you might get from the present mine if you went further down.

*Mr. Woakes.*—Without going further down.

*President.*—On the present developments?

*Mr. Woakes.*—Yes.

*Dr. Fermor.*—May I ask one question? What do you mean by “ore reserves”? Is it ore that exists or ore that you have proved to exist?

*Mr. Woakes.*—The ore reserves are ore deposits that are definitely proved to exist. They are blocked out on at least three sides. They are not computed from the results of boreholes, which can only be classed as probable ore reserves. You can't say for instance that there is a definite ore reserve in the Dhobani mine, where the reserves are classed as probable reserves. We know that there is an ore body there. It is not the same as actual blocking. These ore reserves that we estimate are very conservative indeed.

*President.*—For the time being let us take about one million tons as the total ore available in the Mosaboni mine.

*Mr. Woakes.*—Yes.

*President.*—On an average of about 3 per cent. that gives you 32,000 tons of copper.

*Mr. Woakes.*—Yes.

*President.*—You go further and say that if additional expenditure could be undertaken, you could increase this by another million tons.

*Mr. Woakes.*—Yes, I am certain of it.

*Dr. Fermor.*—I think I might perhaps tell you what is the general practice of metal mines in this respect. From the sound financial point of view metal mines have very rarely sufficient ore reserves to justify the existence of an enterprise at all. Looking at it from the capital point of view, every mine ought to have say 30 years reserves, whereas very few metal mines can show reserves sufficient for 10 years work. For instance the Kolar Gold mines which have now been working for over 50 years have never had more than about 3 years reserves blocked out. The Kolar practice is that each year they extend their development underground so as to develop new reserves equal to the amount of ore extracted during the year. They consider it financially impracticable to undertake development ahead to prove greater reserves than this.

*President.*—The problem with which we are concerned is this. We have got to find out whether, if we granted protection, the Indian Cable Industry which might require say 3,000 or 4,000 tons of a particular class of copper every year would be able to get its copper from the country. If there was not a reasonable possibility that the copper mines in this area would be able to yield for a reasonably long time that amount of copper, then the whole assumption on which we grant protection might prove wrong.

*Dr. Fermor.*—It is impossible for you to get that information. The method by which copper mining is undertaken is such that you will never get information which will enable you to say that there will be sufficient copper available to justify any measure of protection.

*President.*—That I understand. There are two points there. There is first the amount of copper ore which has been actually located, blocked out. Then in addition to that you generally get an estimate of the possibilities of the copper ore, don't you?

*Dr. Fermor.*—I do not know whether when the Indian Copper Corporation was floated, an estimate of the possible ore supplies was given to the public.

*Mr. Woakes.*—We have not considered that seriously because it is not considered professional etiquette by Mining Engineers to give an estimate of the probable ore reserves. In my letter to the Tariff Board I have mentioned one million tons, but I would not report that in an official Report, because it is not considered a right thing to do, is it?

*Dr. Fermor.*—No.

*Mr. Woakes.*—Supposing I am absolutely wrong, it will be said, I am trying to hoodwink the public. I have no definite evidence to go on with probable ore reserves. To a mining man like myself who lives there, the evidence is there, but it cannot be absolutely definitely proved. May I say one thing in this connection? Take the case of the Cape Copper Company,

who operated at Rahla Mines and went down 1,000 feet. We have gone down only 500 feet. The Cape Copper ore body continued to 1,000 feet, and our own ore bodies being identical and on the same copper belt, we are confident they will do likewise. So far as we know there is nothing to stop our ore body going down to 3,000 or 7,000 feet as the Kolar Gold Mines do.

*President.*—I understand that. In the Singhbhum copper area during the past 50 years various Companies have worked. Many of them failed. So that all along this area you have had frequent experimental work done in the past. In addition to that the Geological Survey has time and again examined this area.

*Dr. Fermor.*—The cause of the failures in the past I do not know for certain but I can tell you the more recent history. Sir Thomas Holland, when he was Director, Geological Survey of India, thought that nobody would ever take up this copper proposition. So he got sanction from Government to investigate it. Then we imported our own drills, and our staff and we started drilling. Eventually the Cape Copper Company which was in existence then took over the results of our work and our drills and staff and went on with it. We had by then shown that copper ore was obtainable to a depth of about 1,000 feet from the surface—the figures are given there—and the Cape Copper Company continued for some time and eventually went into liquidation. I am not certain about the cause of their failure but I understand that it was due to the milling plant that was put up not being suitable. Mr. Woakes can tell you more about that.

*Mr. Woakes.*—It was due to very bad management.

*President.*—Would you agree to commit yourself to a proposition of this kind that it is not an unreasonable thing to say that in this Singhbhum copper belt there might be considerably larger supplies of copper ore than have already been located and blocked out.

*Dr. Fermor.*—Do you ask me whether it is possible to get larger supplies?

*President.*—Yes.

*Dr. Fermor.*—It is possible.

*President.*—Considerably larger supplies than have already been located?

*Dr. Fermor.*—Yes. If you want definite proof, it could be obtained by diamond drilling. For instance, if Mr. Woakes in the case of his Company bored holes to test the continuation of these deposits down to 1,000 feet and he got it, he could take that as a valuable indication that the copper ore deposit continued to that depth.

*Mr. Woakes.*—I should never actually recommend doing it because I am certain that it is there. I would rather go down by actual development of the deposit as we are now doing.

*President.*—It will depend on the price that you can get. It is really a financial matter. Supposing for example the prices of copper were sufficiently attractive, then there is nothing to prevent you from going further down and extracting it.

*Mr. Woakes.*—We are going down all the time. We have only reached the 500 feet level. We are going on developing and going deeper.

*President.*—Without locating other areas, whether it is worth while for you to incur the additional expenditure is a thing that depends on the price of copper that you will be able to get.

*Mr. Woakes.*—That is to a great extent true, but with any normal price of copper there is no doubt about it. We consider we are at least going to work for 20 or 30 years. We have not put down this plant which has cost us so much money with the idea of shutting down in five years time. I am sure we have every intention of, and we will go on, working at least for 30 years. The question of ore reserve does not worry us at all.

*President.*—It does not worry you?

*Mr. Woakes.*—No, not in the least. It looks very nice to see 2 million tons of reserves if you have money to do it. The money will be locked up-

for 5 or 6 years ahead and there will be no immediate return on it. We do not want to do that. We are developing and opening up each month, so far as we can, the same amount as we take out.

*President.*—At present you are extracting at the rate of 4,000 tons a year.

*Mr. Woakes.*—Yes, of copper.

*President.*—The whole of this 4,000 tons of copper that you extract and refine is used in your rolling mill. Your rolling mill does about 300 tons a month?

*Mr. Woakes.*—Our rolling mill produces 300 tons of yellow metal, that is, absorbs 200 tons of copper.

*President.*—That is about 2,400 tons of copper a year.

*Mr. Woakes.*—Yes.

*President.*—That gives you a balance of 1,600 tons

*Mr. Woakes.*—Yes.

*President.*—What do you do with that?

*Mr. Woakes.*—We sell that in the bazar in the Calcutta market as ingot copper. Last year we sold 2,000 tons as ingot copper. We think that the normal consumption is about 180 tons a month in India. This year we have not sold so much because the conditions are so bad and everybody is sitting tight.

*President.*—How much do you sell to Government? In what form do you sell it to Government?

*Mr. Woakes.*—We sell it to the Mint in the form of ingots and slabs.

*President.*—And for ordnance purposes?

*Mr. Woakes.*—We have not sold any yet for that purpose. We are hoping to get that contract at the close of the year.

*President.*—If you get that contract, in what form would you sell?

*Mr. Woakes.*—As copper ingots—exactly as we are doing now.

*President.*—Supposing it was possible for you to instal an electrolytic refinery and supposing you got a demand of 3,000 to 4,000 tons of electrolytic copper, I am not quite clear from your letter what the position would be. If that amount of additional demand came to you, then would it mean that you would divert your supplies from yellow metal to this or would you consider the question of extracting further supplies?

*Mr. Woakes.*—We should consider the question of extracting further supplies. We should keep our present market. We do not want to lose the market which we have built up. We will extend our plant and get double the output. We should double up our whole plant so as to produce 7,000 tons a year instead of 3,500 or 4,000 tons a year.

*President.*—That is to say, increase the whole plant from the extraction point to the refining point?

*Mr. Woakes.*—Yes.

*President.*—Further extraction plant, further power plant, further refining plant and possibly plant for the manufacture of black rod?

*Mr. Woakes.*—Yes. It is rather a big undertaking. It is not merely a question of putting in an electrolytic refinery plant. As we have put in a rolling mill, we cannot let that remain idle. We must make full use of that. We could possibly divert 1,800 or 2,000 tons of ingots which we sell now and convert it into electrolytic copper.

*President.*—Another point arises in this connection. Your demand for yellow metal sheets in India is 300,000 cwts. You say that that is the normal demand.

*Mr. Woakes.*—Yes. It is getting on for 20,000 tons a year.

*President.*—300,000 cwts. is 15,000 tons and taking the proportion of two-thirds, it gives you 10,000 tons of copper?

*Mr. Woakes.*—Yes.

*President.*—The point that I am not clear about is this. You have this market already here. There is this existing market for yellow metal sheets, for 10,000 tons of copper. As a pure business proposition would it be better for you to extend in the direction of increasing your yellow metal plant or extend in the direction of capturing the electrolytic copper market? Supposing the Indian Cable Company was prepared to take 3,500 tons from you, you could extend in the direction of capturing a larger market for the yellow metal sheets or get this market for electrolytic copper. As a business proposition, which would you take? Are you quite sure that you would go in for electrolytic copper?

*Mr. Woakes.*—I am not really in a position to give an answer to that. I think that it must depend on the Board of Directors in London. I should put a proposition of that nature to my Directors.

*President.*—I don't want to commit you to a definite undertaking. What I mean is taking the costs and the prices, speaking generally from a business point of view, which would be more worth while? I don't want you to give me any undertaking.

*Mr. Woakes.*—It is very difficult to say. If the whole of the yellow metal market was in Calcutta, undoubtedly the yellow metal market would be more attractive. But I cannot tell you off hand what the Calcutta market can take. A great deal of the market is in Bombay and Madras—Bombay particularly. That means we have to ship our sheets from here to Bombay and compete with the home prices there. So, Bombay is less attractive to us than Calcutta. The Calcutta market is certainly definitely more attractive financially than the electrolytic copper. As regards the other two markets, viz., Bombay and Madras, I would not like to say so. The Bombay market is I believe about 50 per cent. more than Calcutta.

*President.*—Have you got separate figures for Calcutta?

*Mr. Woakes.*—I have figures here (shown). It is about 50 per cent. more in Bombay than in Calcutta.

*President.*—What do you think is the demand in Madras?

*Mr. Woakes.*—I could not get hold of the figures. They are not as large as Calcutta.

*President.*—Practically your present capacity is the market in Calcutta which is about 4,000 tons of yellow metal sheets?

*Mr. Woakes.*—Yes.

*President.*—And that is somewhere about your capacity?

*Mr. Woakes.*—Yes, at the present moment. The question of policy comes into the electrolytic proposition. Although there might be a slight financial gain in going for the yellow metal, we have the market in the case of electrolytic copper ready by the side of us and there is no question of Agents, etc. We should have a market almost at our door. If that was assured, it would be a very big factor in this electrolytic proposition.

*President.*—Let me put the proposition from another point of view. I understand that as far as the definiteness of the demand is concerned, the electrolytic copper at Tatanagar would be a more attractive proposition and as far as freight is concerned, the Bombay and Madras markets for yellow metal sheets might not be very attractive.

*Mr. Woakes.*—At present prices, they are not at all attractive.

*President.*—I am coming to the question of prices. What is the price of electrolytic copper now, Mr. Leake?

*Mr. Leake.*—£36-10-0.

*Dr. Fermor.*—How big is the area in which you can develop your copper mines? What is the area of your concession?

*Mr. Woakes.*—We have got the whole belt—80 square miles.

*Dr. Fermor.*—If you could foresee the ultimate development of several copper mines, then would it be very difficult to secure adequate markets?



*Mr. Woakes.*—If we can double our production say from 4,000 tons to 7,000 tons, we can bring our costs down very much and make our plant much more efficient. For that reason it would be a very attractive proposition to have a definite market assured to us.

*President.*—Your point is rather different.

*Dr. Fermor.*—If it is possible that all the ground for which you have concession contains sufficient deposits to enable you to develop to the fullest extent of the Indian market both for brass and copper obviously you should take the opportunity of getting the electrolytic copper market when it occurs, in spite of the fact that the yellow metal market is easier to gain and more attractive.

*Mr. Woakes.*—I would not like to say that.

*Dr. Fermor.*—From the technical point of view it is easier to prepare yellow metal. Therefore you can secure the whole of that market as convenient, and pay attention now to the electrolytic part if you can secure the electrolytic copper business.

*Mr. Woakes.*—That is certainly a point. In the case of yellow metal we have to compete against Germany. There we have already been hit. They are cutting prices and cutting prices all the time. It is quite a different proposition to have a concern right by the side of you who will say "We will take 3,000 tons a year". There is no fighting for the market and no competition for it.

*President.*—The prices of yellow metal have come down to the same extent as electrolytic copper?

*Mr. Woakes.*—Yes, if anything more.

*Dr. Fermor.*—Supposing as a result of discussion eventually it was decided that it was good policy for you to manufacture electrolytic copper, would you prefer to do it by expanding the existing mine or by working a separate mine with a separate milling and smelting plant?

*Mr. Woakes.*—By expanding the present plant.

*Dr. Fermor.*—So that your present ore reserves for 5 years would only last 2½ years.

*Mr. Woakes.*—We would take 2 years to put up the plant. In those two years we should immediately double our development programme. Thus in two years time we should have sufficient reserves of ore to meet the increased output required. That would definitely be the policy.

*Dr. Fermor.*—You would be prepared to run the risk?

*Mr. Woakes.*—It may sound optimistic but I don't think it is really a question of ore reserves. It is not so in the least. It is simply a question of capital.

*President.*—It did not worry in the initial stages any of the old companies that worked in the Singhbhum area—I mean the question of copper ore reserve. What I mean is this. From what I have heard I gather that the failure of the last concern was due to bad management and that the failure of others was due to the fact that they struck poor deposits.

*Mr. Woakes.*—The Cape Copper Company was the only company which made any serious efforts to produce copper.

*Dr. Fermor.*—No. They stopped after developing the mine.

*Mr. Woakes.*—Everybody who attempted and failed before started without the requisite capital. Unfortunately copper mines require a tremendous amount of capital.

*President.*—Leaving alone the question of ore reserve, take this price of £37 for electrolytic copper which is about Rs. 500. If at this price you got a definite offer from the Indian Cable Company would it be worth your while with this price?

*Mr. Woakes.*—With the present tariff yes.

*President.*—That would bring up the price to Rs. 600?

*Mr. Woakes.*—Yes.

*President.*—£37 is the price of black rod?

*Mr. Woakes.*—It is the price of the ingot.

*President.*—What is the price of black rod?

*Mr. Woakes.*—£42, that is to say £5 more.

*President.*—Adding a duty of 20 per cent. it is £50?

*Mr. Woakes.*—We can produce under that figure.

*President.*—You have given us some figures of capital expenditure. You have estimated that the capital expenditure required is £77,000 for an additional refinery and an additional power plant. If you include the expenditure on additional power plant and additional extruding plant then it comes very nearly to Rs. 26 lakhs. That is your estimate?

*Mr. Woakes.*—That includes new development too. That is a rough figure.

*President.*—That just gives us a sort of rough guidance. If you instal additional extruding plant, smelting plant, power plant and extraction plant you would require about 26 lakhs of rupees.

*Mr. Woakes.*—That is our approximate estimate.

*President.*—I don't know at what rate you take depreciation on this kind of machinery.

*Mr. Woakes.*—Say 10 per cent. I believe it is  $7\frac{1}{2}$  per cent. for electrical machinery and 10 per cent. for other machinery, the same as provided by the Income-tax authorities.

*President.*—That means if you are going to produce 3,500 tons of electrolytic copper that would mean that for depreciation alone you would have to find about Rs. 75 per ton. Let us take it at Rs. 70. This preliminary expenditure that you estimate at Rs. 2 per ton of ore, that is really recurring expenditure; it is part of the cost?

*Mr. Woakes.*—That is right, provided ore reserves are maintained at a certain figure.

*President.*—So that you add another 70 rupees. That gives you Rs. 140 on depreciation and preliminary operations.

*Mr. Woakes.*—I would like to say that that figure of Rs. 2 per ton is very much on the high side. It is actually about half of that. Rs. 2 is the figure we charged in the first year against each ton of ore we took out. I went into it since to see what actually the development of our reserves is costing us now, and I find that it is costing us almost exactly a rupee a ton. The reason for that is that the preliminary ore reserves were much more expensive to obtain than they are now.

*President.*—At the rate of a rupee per ton it is Rs. 35. That brings the totals to Rs. 105. You have got a price for electrolytic copper including duty of Rs. 660 a ton. That gives you Rs. 560 to cover your working expenses and your profit.

*Dr. Fermor.*—I suppose in this rupee you are putting also interest on capital outlay on the shaft and plant to equip the shaft and so on. That is how it becomes less afterwards?

*Mr. Woakes.*—That is one of the reasons. You have the shaft already there now.

*President.*—If you are not opening out a new area then your preliminary expenditure goes down as you go on with the operations and you say it has come down from Rs. 2 to Re. 1. As Dr. Fermor has suggested it is largely because it is the same overhead which is spread over a larger output.

*Mr. Woakes.*—Yes.

*President.*—But if you open out a new area you would have to start with Rs. 2, or let us take Rs. 1-8 which would be more to the point. That will bring it down to Rs. 540. If you consider 5 per cent. as a reasonable return on your capital that brings it down to very nearly Rs. 500 to cover your working expenses to make electrolytic copper.

*Dr. Fermor.*—Mining people expect about 10 per cent. because unsuccessful enterprises have to be paid for from the successful ones.

*President.*—That gives you about Rs. 450 to cover your working expenses on electrolytic copper. What I want to get at is this: Assuming the same expenditure on depreciation and preliminary work, profit and so on as on yellow metal sheets could you tell us what is the sort of margin you would get to cover working expenses on yellow metal sheets? We started with your capital expenditure and your preliminary expenditure; I calculated depreciation, interest on capital, preliminary expenditure required and deducted all that from Rs. 660 which is the price that you would get for your electrolytic copper with a duty of 20 per cent. That leaves you somewhere about Rs. 450 to cover your working expenses.

*Mr. Woakes.*—Yes.

*President.*—Can you compare that with the sort of margin that you have now for yellow metal sheets and tell me on that basis whether it will be better for you as a business proposition to undertake the extension of the business for yellow metal sheets or to go in for electrolytic copper? I looked up the trade figures and I find that the average price of yellow metal sheets in 1930-31 is very nearly Rs. 850. I suppose it has come down since.

*Mr. Woakes.*—We get Rs. 32 per cwt.; that is Rs. 640 a ton.

*President.*—Practically the same as electrolytic copper?

*Mr. Woakes.*—Yes.

*President.*—That makes the proposition simpler. You are getting practically the same price for your yellow metal sheets as you will be getting for electrolytic copper. Is it a good business proposition to go in for electrolytic copper rather than the expansion of your yellow metal output?

*Mr. Woakes.*—It certainly looks financially as if yellow metal sheet is a better proposition, but I cannot commit myself without letting my Board know because the Board might think it good policy to fill a definite demand that there is from a firm close to our works for which there is no competition rather than looking to Bombay and Madras for sales with keen competition against you.

*Dr. Fermor.*—It seems to me rather surprising that the price of both should be the same?

*Mr. Woakes.*—The one is in the form of sheets which requires a very expensive plant and the other is in the form of ingot.

*President.*—This Rs. 660 which we estimated as the price of electrolytic copper is the price of electrolytic black rod plus a duty of 20 per cent.

*Mr. Woakes.*—If you look to the quotations, electrolytic is quoted at £36 and yellow metal at £35-5, that is at a Pound less. On that £36 you have to add £5 to make into black rod.

*President.*—In that case Rs. 32 that you gave as the price of yellow metal sheet is not the current price; the current price is lower than that?

*Mr. Woakes.*—It is the price of the latest orders that we have been getting.

*President.*—If you take £37 for electrolytic copper and add £5 for manufacturing into black rod, that is £42 and adding 20 per cent. duty that becomes £50.

*Mr. Woakes.*—I think the point is that you cannot really take present prices at which practically nobody can produce at a profit and therefore if the prices are to remain as they are now no proposition is profitable. Normally the price of copper is £64 a ton. My own idea is that it will be somewhere between £50 and £55. At those prices this figure that you have been giving me of Rs. 650 would be a different proposition.

*President.*—If the price of copper went up hereafter then the price of electrolytic copper would go up in higher proportion than yellow metal sheet?

*Mr. Woakes.*—Yes.

*President.*—Assuming that the price of zinc does not rise in the same proportion then of course electrolytic copper would be a more attractive proposition?

*Mr. Woakes.*—Yes.

*President.*—At present you say your fire refined copper contains a certain amount of nickel which makes it more suitable for the manufacture of brass but makes it less suitable for the production of electrolytic copper.

*Mr. Woakes.*—It is possible to make it.

*President.*—Are you absolutely certain that the electrolytic plant will remove the nickel?

*Mr. Woakes.*—There is not a shadow of doubt about that. Our copper is 99·7; we can get it up to 99·8, but to convert it into electrolytic copper it will cost us a £75,000 plant and cannot be done without an electrolytic plant.

*President.*—In 1927 when you were erecting your plant, supposing at that time the Indian Cable Company had been paying a duty of 15 per cent. on their black rod, would it have made any difference to your plant?

*Mr. Woakes.*—I think it would, if we had known that we had an assured market there.

*President.*—I don't say an assured market, I say supposing there was a duty of 15 per cent. on black rod in 1927 when you were erecting your plant, then you would have considered the question of making electrolytic copper rather than fire refined copper?

*Mr. Woakes.*—We must make fire refined copper to start with. What we are considering is the question of making electrolytic copper instead of yellow metal sheets. We did consider this question and decided on the yellow metal. If there had been an import duty on the rod, it would certainly have been another factor in favour of the electrolytic copper, but whether it would have made us decide, I cannot say.

*Dr. Fermor.*—Would you have required extra capital?

*Mr. Woakes.*—Yes, I discussed this matter with Mr. Leake and said that if he wanted us to do that, his firm should put up the money required for a plant for black rod. The way I looked at it then was that we were to spend all the money in supplying black rod, the market for which might fail us in a year's time and it did not seem an attractive proposition.

*Dr. Fermor.*—Did you consider the question of putting in an extra plant for that?

*Mr. Leake.*—Yes. They could not give us the copper at a reasonable price. We only ask that it should be 15 per cent. less than the bazaar.

*Dr. Fermor.*—When was this discussion?

*Mr. Leake.*—In 1928.

*Mr. Woakes.*—We put in the plant for fire refined copper. We were making more than the Indian market would absorb of copper and therefore we had to get rid of the surplus production either in the form of electrolytic copper or in the form of sheet. We decided on the sheet.

*President.*—As far as sheets are concerned, your output is very nearly the market available in Calcutta.

*Mr. Woakes.*—Yes.

*President.*—So that the real question is if extension was possible, would you extend in the direction of capturing yellow metal market further away in Bombay and Madras or would you rather undertake the supply of electrolytic black rod to the Indian Cable Company.

*Mr. Woakes.*—The whole thing depends on the kind of assurance that the Indian Cable Company would give as regards this market. If it is going to be 1,000 tons, I think definitely the question of installing an electrolytic plant is not possible. If it is 3,500 tons, most definitely it is worth very serious consideration.

*President.*—As far as we are concerned the kind of assurance that we can give to your Company is this: assume that protection is granted to the Indian Cable Company, protection which is sufficient to establish the industry in this country—let us say for the time being a revenue duty of 15 per cent. on all their cables and wires. In addition to that they would be expected to pay a revenue duty of 15 per cent. on all the black rod that you import. They are protected to the extent of 15 per cent. on their products and you are protected to the extent of 15 per cent. on black rod. Supposing the Legislature came to that conclusion, would you consider on the basis of that you could proceed with the installation of an electrolytic plant? That is the utmost assurance that could be given assuming that a case for protection is established.

*Mr. Woakes.*—I have not gone into what is the reasonable assurance of this arrangement. Is it made on the assumption that you capture all the imported cables?

*Mr. Leake.*—Taking the total market as 5,500 tons, we assume that the Indian Cable Company would capture two-thirds of that.

*President.*—I would put it at 3,500 tons. Assuming protection is granted which would enable them to work up to an output corresponding to 3,500 tons of electrolytic copper and at the same time a revenue duty is imposed on black rod imported into this country, supposing that was the position, would you consider that a reasonable assurance?

*Mr. Woakes.*—There again I have to put it up to my Board of Directors. I am absolutely certain that it will be seriously considered. I don't know how can it be otherwise when the market is ready at your door like that.

*Dr. Fermor.*—The position would be worse so far as your ore reserve is concerned.

*Mr. Woakes.*—I don't think that would be worrying us. I don't think I am unduly optimistic. Really it is simply a question of capital.

*President.*—That makes the position clear as far as we are concerned.

*Mr. Rahimtoola.*—I would like to ask you one or two questions in connection with this. You have emphasised a great deal in the discussion that took place just now that you would favour the idea of supplying the quantity of electrolytic copper to the Indian Cable Company, simply because there would be no competition. Do I understand that there would be a definite agreement between the Indian Cable Company and yourself?

*Mr. Woakes.*—We have not discussed this matter with the Indian Cable Company. We have only just as the result of this discussion come into touch. We discussed it about two years ago. We upset the proposition then by deciding to put up a rolling mill instead of an electrolytic refinery.

*Mr. Rahimtoola.*—I am asking you the point which you yourself made that the greatest attraction for you would be that you would have no competition to face. By "no competition", do I understand that a definite quantity should be taken by them for a definite period.

*Mr. Woakes.*—Yes. I do not know whether they would commit themselves to make a definite agreement as regards the quantity. I imagine that we can have an agreement whereby the Indian Cable Company would take their requirements of copper at the market price *plus* the duty.

*Dr. Fermor.*—I think that question referred to competition from other people. Supposing somebody else offered copper to the Indian Cable Company? Supposing the Burma Corporation started making electrolytic copper? You know the Burma Corporation are exporting copper in the form of copper-matte' Burma people prefer to export it. Their matte is very complex containing other things. It contains gold and silver too.

*President.*—If you take American mines or Rhodesian mines, what is the percentage of marketable metals other than copper which their ore contains.

*Mr. Woakes.*—The Rhodesian mines will sell nothing else but copper.

*President.*—Do they have gold or silver?

*Dr. Fermor.*—No.

*Mr. Woakes.*—I have never heard of gold or silver content of any value.

*President.*—Where is the gold and silver content?

*Mr. Woakes.*—In America. We have a certain amount of gold and silver in our ore. Which we can recover in an electrolytic copper plant.

*Dr. Fermor.*—All copper contains a minute percentage of both.

*President.*—The higher the percentage the less will be your cost.

*Mr. Woakes.*—Yes.

*Mr. Rahimtoola.*—You gave us to understand that you are not prepared to commit the Board of Directors on the definite question about the preference of the electrolytic copper to yellow metal for the future.

*Mr. Woakes.*—I am quite prepared to recommend to the Board of Directors, but I am not prepared to say that they will be prepared to accept it.

*Mr. Rahimtoola.*—You are prepared to recommend this proposition on a definite understanding that the minimum quantity would be 3,500 tons a year.

*Mr. Woakes.*—Yes, 3,000 to 3,500 tons would make a proposition which is worth very serious consideration to us.

*Mr. Rahimtoola.*—You think that if such a proposition came forward, you would be able to arrange the necessary additional capital.

*Mr. Woakes.*—I would not say that at all.

*Mr. Rahimtoola.*—I think that is a proposition which must be seriously considered.

*Mr. Woakes.*—We could not, as far as I know, get the money to put up the plant at the present moment. Whether the Indian Cable Company can assist us in any way or whether they think they can get anybody to invest money, I can't say.

*Mr. Rahimtoola.*—I think you will recognise as a businessman that however attractive a scheme may be, if, for financial reasons, it cannot be put forward, then it is no use looking at it.

*Mr. Woakes.*—At the present time it is practically impossible owing to the market price of copper.

*Mr. Rahimtoola.*—May I know approximately whether there would be any facilities in three or five years time?

*Mr. Woakes.*—The Indian Copper Corporation has £400,000 of unissued capital. The nominal share value is 2 shillings and the present market price is 1s. 3d. We cannot possibly issue that capital till our shares get up to par.

*Mr. Boag.*—What is the value of the total issued capital of the Indian Copper Corporation?

*Mr. Woakes.*—The issued capital is £600,000 including debentures.

*Mr. Boag.*—There is another £400,000 worth of unissued capital.

*Mr. Woakes.*—Yes. I am not a financier, but I should not at all like the proposition at the present market price of copper. As soon as things begin to improve, I can't see any reason whatever why the money should not be put up.

*Dr. Fermor.*—Has your Company yet declared any dividend?

*Mr. Woakes.*—No. If the price of copper goes up, it is of course a much more attractive proposition.

*Mr. Leake.*—The price of copper is bound to go up because all are producing at a loss.

*Dr. Fermor.*—Did your last report show a profit?

*Mr. Woakes.*—Yes. Most of which went into depreciation.

*Dr. Fermor.*—Are you now nearing dividend stage if the price of copper improves?

*Mr. Woakes.*—Definitely.

*Dr. Fermor.*—But at present prices, is there a chance of dividend?

*Mr. Woakes.*—No, not at this price. I can definitely say that if it was not for the import duty, we should have shut down six months ago.

*President.*—You mean the import duty on yellow metal sheets.

*Mr. Woakes.*—Yes and copper ingot. The Indian Copper Corporation would not have started if there had not been a protective tariff. The mere fact that there was an import duty attracted the necessary capital. Then the slump period came along and it is only the protective tariff which has enabled us to pull through. If we get back to normal prices the concern can be put firmly on its feet with a normal price for copper.

*President.*—I find in addition to yellow metal sheets imported, there is also about 200,000 cwts. of copper sheets.

*Mr. Woakes.*—That is another thing we have to consider. We can roll copper in our present mill.

*President.*—For practical purposes that is also an addition to your market as you are equipped at present.

*Mr. Woakes.*—Yes.

*President.*—With your present plant, you could either roll 4,000 tons of yellow metal sheets or you could roll 4,000 tons of copper sheets.

*Mr. Woakes.*—The market for copper sheets is very small in Calcutta. The biggest demand is in Bombay. That is why we have concentrated on yellow metal. As we have to pay freight to Bombay, it is not an attractive proposition to us. We can't roll alternately one day yellow metal and one day copper.

*President.*—What is the import of copper sheets into Calcutta?

*Mr. Woakes.*—It is not enough to absorb our monthly output of the rolling mill.

*Mr. Rahimtoola.*—It has not been proved attractive for you to devote your attention to this aspect of the question.

*Mr. Woakes.*—No. There is such a big demand for the yellow metal.

*Mr. Rahimtoola.*—You have, I understand, looked into this question.

*Mr. Woakes.*—We have certainly looked into it. Our rolling mill is capable of rolling copper or yellow metal.

*Mr. Rahimtoola.*—As regards question 9, you have stated that the minimum market for which electrolytic copper can be manufactured economically is not less than 5,000 tons a year.

*Mr. Woakes.*—That statement I got from our Metallurgist. He said he believed he was right. I had to write this in a great hurry and have asked for confirmation from home. I do not know whether the statement is correct or not. I know that a certain tonnage is considered the minimum at which it can be an attractive proposition.

*Mr. Rahimtoola.*—That is a point which the Tariff Board has got to consider, viz., what should be the economical production. The maximum tonnage that you are likely to get at present, as far as we can see, is about 3,500 tons.

*Mr. Woakes.*—As I pointed out here, other factors come into this. If we increase our production, our mining costs and our costs up to the point of refining copper will be reduced. Therefore a sure market of 3,500 tons would certainly be considered sufficiently remunerative.

*Mr. Rahimtoola.*—You want a heavy capital expenditure of Rs. 26 lakhs.

*President.*—Your point is that if you extracted, say, about 8,000 tons of copper, out of that 4,000 tons was turned into yellow metal sheets and 4,000 into electrolytic copper, then the economical minimum may be some-

thing less than 5,000 tons electrolytic copper, because your extraction plant would cover both.

*Mr. Woakes.*—Yes. I wish I had figures with me. The figures that I put up to the Home Board were that if we increased our capital to £900,000, taking our consumption of copper at 2,000 tons, the Indian Cable Company 3,000 tons, and our yellow metal 2,500 tons, on our present costs and with copper at £50 a ton which, I think, is a conservative estimate, we should have a 30 per cent. return on the capital invested.

*Dr. Fermor.*—Is that before you paid depreciation?

*Mr. Woakes.*—That was simply the profit per ton on working costs in India.

*Dr. Fermor.*—That is gross profit.

*Mr. Woakes.*—Yes, it would give 30 per cent. return on £900,000.

*President.*—You mean after setting aside depreciation?

*Mr. Woakes.*—Before setting aside depreciation.

*President.*—That is not bad.

*Mr. Woakes.*—It is very good. I have no doubt that it is a very attractive proposition.

*President.*—That is at £50.

*Mr. Woakes.*—Yes, and there would be 20 per cent. on to that figure here.

*Mr. Leake.*—The price of copper would probably go back to £60.

*Mr. Woakes.*—In 1929 we got an average of £90 a ton for the first year we produced. We are now getting under £50 which is terribly low. In addition to that all the Government Departments now buy nothing with the result that we have got 1,300 tons of copper in stock.

*President.*—It represents how much money locked up?

*Mr. Woakes.*—About £70,000.

*Mr. Rahimtoola.*—In spite of the fact that there would be an additional capital expenditure of Rs. 20 lakhs over and above what you have spent, 3,000 to 3,500 tons of electrolytic copper would be an attractive proposition for your Company?

*Mr. Woakes.*—I consider it would.

*Mr. Rahimtoola.*—You were talking about the Board of Directors in London. May I know what is your position here?

*Mr. Woakes.*—As General Manager, I am responsible to the Board of Directors in London.

*Mr. Rahimtoola.*—And the company is registered in London?

*Mr. Woakes.*—Yes, it is a sterling company.

*Mr. Rahimtoola.*—The whole management is in London?

*Mr. Woakes.*—Yes.

*Mr. Rahimtoola.*—Except that the Company's copper mines are here.

*Mr. Woakes.*—Yes.

*Mr. Rahimtoola.*—They are leased from Government?

*Mr. Woakes.*—They are leased from the Official Receiver.

*President.*—Each Company gets its lease from the Receiver of the past company.

*Mr. Woakes.*—It is not that actually. The mining rights belonged to the old Dhalbhum Raja. He bequeathed the mining rights to Prince Mohamed Shah and his estate is in the hands of the Receiver. Nobody ever worked copper mines seriously in Dhalbhum before. Dhalbhum mining has had a very bad reputation. We have had very great difficulty in raising capital for the very reason of previous failures.

*Mr. Rahimtoola.*—You say "I earnestly appeal therefore for a protective tariff on imported copper wire as early as possible to prevent the serious



situation that is arising from its omission". I want to know why you say that.

*Mr. Woakes.*—I understand from our selling agents that copper wire is imported into India free of duty from Japan, in the form of briquettes and is sold in the market against our refined copper, which is used normally for making brass. The bazar uses the stuff imported from Japan for making brass. That is a very serious blow to us because they are importing it free of duty. It is equivalent to importing ingots.

*Mr. Rahimtoola.*—Do I understand that you want protection?

*Mr. Woakes.*—Yes, definitely.

*Mr. Rahimtoola.*—I must tell you that it is outside our terms of reference. We are at present examining you on the principal raw material of another applicant for protection.

*Mr. Woakes.*—I simply put it in there because that point has come up. Although we have a protective tariff on copper it is being got round in that way by people importing it free of duty.

*President.*—It is imported as hard drawn copper wire?

*Mr. Woakes.*—Yes.

*President.*—Is it possible to use hard drawn copper wire for ordinary purposes?

*Mr. Woakes.*—Yes.

*President.*—Is it more difficult to work?

*Mr. Woakes.*—No. It is absolutely pure copper.

*Mr. Boag.*—Have you any idea of the extent to which it is being done?

*Mr. Woakes.*—No. I have not really very much idea. I do not know very much about it. Gillanders our selling agents can say more about it. The Customs people also know all about it. Our sales have certainly dropped off this year. How much is due to bad trade and how much is due to this I do not know.

*President.*—This fact has been brought to our notice by the Collector of Customs of some other port and not of Calcutta.

*Mr. Boag.*—We have heard from Madras.

*Mr. Leake.*—A lot of copper wire is used for making bangles. We have been asked to do that.

*Mr. Boag.*—You mean hard drawn copper wire?

*Mr. Leake.*—Yes. We know that it is going to be used for purposes other than that. Of course other importers of hard drawn copper wire cut it up and sell no matter for what purpose it is used. It is taking the place of copper ingot.

*President.*—It is the ingot copper that bears the revenue duty?

*Mr. Woakes.*—Yes.

*Dr. Fermor.*—How is this wire converted into ingots?

*Mr. Woakes.*—It is being briquetted. After it has been sold, it is melted and mixed with zinc and other metals.

*Dr. Fermor.*—They are using pure copper?

*Mr. Woakes.*—Yes, they get the pure copper from these briquettes.

*President.*—What is the position with regard to the tariff on black rod?

*Mr. Leake.*—It is 20 per cent.

*President.*—It is remitted in your case?

*Mr. Leake.*—Yes, under special licence.

*President.*—How is a man enabled to import black rod into this country free of duty?

*Mr. Leake.*—It is simply imported as hard drawn wire.

*President.*—It really comes in as wire not less than 1/80th square inch?

*Mr. Leake.*—Yes, although it is in a more highly manufactured state, it would be 12 to 15 per cent. cheaper than black rod. There is a duty on black rod but not on the other.

*Mr. Woakes.*—As regards the letter you are referring to, I may say that I sent a copy of same to my Board of Directors in London and told them that I had to appear before you on the 24th. As there was not much time left, I told them that if there was anything in my letter to the Tariff Board to which they did not agree, they should send me a cable. As I have not heard anything from them, I take it that what I have said here more or less represents the opinion of the Board.

*Dr. Fermor.*—When would they have received your letter?

*Mr. Woakes.*—At the beginning of last week when the air mail got in. They would have got my letter one full week before I came here.

*Mr. Rahimtoola.*—Dr. Fermor, I wanted to know from you some facts about the Copper Mines in the Shan States of Burma.

*Dr. Fermor.*—Copper is found at Badwin in the Northern Shan States of Burma. It is really a mixed ore of lead, zinc, silver and copper. The Burma Corporation treat the ore for the purpose of separating the various metals and the copper portion is being reduced to the first stage of matte and exported in that form.

*Mr. Rahimtoola.*—As regards Ghatsila you say "There is no information in this office concerning the actual purity of the refined copper produced at Ghatsila, but it is believed to compare very favourably with electrolytic copper". Is this verified?

*Dr. Fermor.*—I made enquiries on that point. Mr. Woakes informed me that his copper was 99.60 per cent. pure and that of the electrolytic copper 99.94 per cent. The copper of the Indian Copper Corporation is less pure by .34 per cent. than the electrolytic copper. That is what it comes to.

### The Cawnpore Electric Supply Corporation, Limited.

*Letter No. E. S. 49, dated the 19th May, 1931.*

With reference to the application for protection to the manufacture of electric wires and cables other than paper insulated cables which has been submitted by the Indian Cable Company, Limited, Calcutta, we desire to make the following representations—

- (1) The Indian Cable Company, Limited, are at present in a position to offer cables and wires at prices that are competitive with other firms supplying cable and wires in India, and we believe obtain a large share of the business.
- (2) Protection means an increase in price of cables and wires, and therefore an increase in the cost of distributing electricity. Many miles of wire and cable were used in connection with the Ganges Canal Hydro-Electric Scheme—a scheme which was primarily formed for pumping water for agricultural purposes. Other schemes of this description will, in course of time, be instituted over many parts of India, and anything that is likely to increase the cost of these schemes such as the protection now asked for should be avoided.

### Aluminium Manufacturing Co., Ltd., Calcutta.

*Letter No. E.A.L./P.W., dated the 4th June, 1931.*

We notice in the *Indian Trade Journal*, Volume C. I., No. 1301, reference to an application made for the protection to the manufacture of electric wires and cables other than paper insulated cables.

If the term "electric wires and cables other than paper insulated cables" is not intended to cover aluminium wires and cables, then we have no objection to offer to the application. If on the other hand this term is intended to include aluminium wires and cables then we wish to make formal application to lodge objection to this application for protection.

The grounds on which our objection is based are the following:—

- (1) Aluminium cable has never at any time been commercially manufactured in India.
- (2) The production of aluminium cable of correct quality is a process which requires considerable experience and specialised knowledge.
- (3) The total demand in India for aluminium cable is insufficient to enable any factory to produce this material in this country at anything approaching economical prices. Further the bulk of the demand consists of orders for large quantities required in a relatively short time. In other words the capacity of a factory in this country able to produce such large orders at infrequent intervals, for delivery within short periods of time, would be very many times in excess of the demand in this country for aluminium cable. Such a factory cannot therefore operate at anything approaching reasonable production cost and the protection which would be required to place such an industry on a proper basis would render the price of aluminium cable excessively high. Such high prices would offer a very serious obstacle to large development and power schemes the value of which to India is a matter of vital importance.

### **The Calcutta Tramways Co., Ltd., Calcutta.**

*Letter dated the 29th June, 1931.*

In connection with the enquiry by the Tariff Board in regard to the granting of protection to the manufacture of wires and cables, I beg to enter an emphatic protest against such a course.

The development of India's industries must of sheer necessity be absolutely dependent upon the provision of cheap power and therefore in consequence upon the development of electrical undertakings; and to do anything which must of necessity militate against such development would be putting back the clock of India's progress. Not only is the development of power supply a matter of paramount importance but I submit the provision of electric lighting is a matter without which it will prove utterly impossible to raise the standard of living in the country.

We feel that while this enquiry into the matter of the importation of electrical goods into this country is being examined by Government, it would be most desirable that legislation should be introduced to protect high class electrical machinery, etc., against competition with goods of low quality, since in an Eastern market these latter introduce themselves with extraordinary rapidity, and it would be disastrous if the country is flooded with low quality and unsafe wires and cables whether of Indian or foreign manufacture.

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### **Chittagong Engineering and Electric Supply Co., Ltd.**

*Letter dated the 7th July, 1931.*

We have gone through a copy of the representation made to you by Messrs. W. T. Henley's Telegraph Works Co., Ltd., of Calcutta, on the subject of the enquiry regarding the proposed additional protection to be given to the India Cable Co., Ltd. On principle we are opposed to any protection of this nature which means additional burden on the consumers. The objection becomes stronger when such protection is recommended for an industry which cannot stand with imported goods on equal merits regarding strength and quality. It may be argued in favour of the protection that it will help the India Cable Co., Ltd., to improve their products and stand on equal merits with imported articles. To this the answer is that if they can show an example and prove that a reasonable help without seriously affecting the pockets of the tax-payers will enable them to stand on their own legs that matter is worth considering, but undue preference in a matter of this nature should not be encouraged only because the manufacturers want it.

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### **The Rangoon Electric Tramway and Supply Co., Ltd.**

*Letter No. 5/P.-5, dated the 10th July, 1931.*

1. With reference to the application which has been referred to your Board for the grant of protection to the manufacture of certain types and sizes of electric wires and cables, as the matter is one of considerable interest, not only to the cable manufacturers, but also to the electrical industry generally, we submit the following comments for your Board's sympathetic consideration.

2. The electrical industry may be divided into two parts—

- (a) The generation and supply of electricity.
- (b) The manufacture of electrical material.

Whatever may be the position of these two branches of the industry in other countries, in India at any rate the former is of incommeasurably more import-

ance than the latter. Protection on cables will no doubt assist the cable manufacturer, but it is equally certain that it will be detrimental to the wider interests of the electrical supply industry, and the consumers.

3. The growth of electric supply has been one of the outstanding features of Indian Industry of recent years, and with the exception of a very few cases where important industrial loads obtain, every supply undertaking is dependent on the private consumer, for its successful operation; without the private consumer scarcely any supply undertaking could carry on. But an essential factor for bringing potential private consumers on the load is the comparative cheapness of the materials for distributing energy. This is particularly true of the smaller consumers, many of whom are precluded from obtaining the benefits of an electric supply, not because of the cost of current, but because they are unable to afford the initial outlay on the wiring and necessary fittings for their houses or shops.

4. We submit that the present duty of 20 per cent. on the smaller sizes of cables such as are used in house wiring, lays too heavy a burden on the small consumer, especially as he has to pay a similar duty on his fittings, lamps, fans, etc. Considering the matter in this way, we argue that the present rates of duty impose a serious restriction on the free expansion of trade in the important indigenous industry of electric supply. If further protection is given to cables, this restriction will be all the more pronounced.

5. We would lay special stress on the task of a supply undertaking in encountering faulty wiring installations. The low standard of education and intelligence among the majority of consumers in India, makes it extremely difficult to impress on them the danger of defective wiring. Fatal accidents from this cause have happened. Even the best cable perishes more quickly under tropical conditions, but matters are made still worse by inferior quality cable being used in the first instance. We are informed that the opinion of importers of reputable cable is that any increase in duty—especially if levied *ad valorem*; will tend to increase the quantity of inferior cable imported into India, and what is more that owing to economic pressure the quality of such cable will degenerate further because it is possible to manufacture cable down to almost any price. If this is so (and we think it quite likely), then any further increase in the duty on imported cables is to be greatly deplored.

6. Finally we would ask your board when considering the application, to bear in mind how much more heavily the electrical industry is taxed by the present duties than any other form of industry. Power driven machinery, including prime movers are admitted free of duty on the principal that the free importation of this class of goods will tend to foster the development of industry in India. But when we turn to the electric supply industry, we find that most of the "Machinery" (using the term in a broad sense) required for generating energy is free of duty but very little of the "Machinery" for distributing energy is allowed free. We may instance, smaller sizes of cables, fans, regulators, lamps, switches, fuses, bare copper wire, electrical control gear below a certain size, and also tramcars all of which bear 20 per cent. duty. Tramway rails, tramway track material (including Portland Cement), and tramway and transmission poles are also all subject to more or less heavy rates of duty. In view of this we would urge your board not to consider any further imposition of duty on cables or other material connected with electric supply.

### **Burma Electric Supply Co., Ltd., Mandalay.**

*Letter dated the 14th July 1931.*

We understand that an enquiry is about to be made regarding an application for protection for the manufacture of electric wires and cables in India by the Indian Cable Co., Ltd., and we wish to put before you our views regarding this matter, as follows:—

(1) In our opinion the manufacture of electric wires and cables in India does not require protection, as while importers of "C. M. A." Grade cables have

to meet charges for packing, freight, Harbour Dues, insurance, landing charges and import duty of 20 per cent., the Indian Cable Company import their principal raw materials such as copper, rubber and lead free of duty. Manufacturing costs must of necessity be considerably less than in Europe and consequently it is reasonably obvious that the Indian Cable Company can manufacture electric wires and cables well below the landed cost of imported cables.

(2) The present protection afforded to them of 20 per cent. assessment *ad valorem*, has already considerably increased the cost, to users, of the majority of such wires that are an essential part of their business.

(3) This increase in price has already adversely affected the growth of electric supply undertakings in Burma, in that it has become necessary to increase the cost of house wiring installations to cover such increase if "C. M. A." Grade cables are used and in our opinion no grade of cable below "C. M. A." quality should be used, or permitted, in this country.

(4) Any further protection afforded to the Indian Cable Company for their manufactures will undoubtedly further raise the prices of "C. M. A." Grade wires and cables to the further detriment of the businesses of electric supply undertakings in this country.

(5) Further protection will also undoubtedly increase the prices asked for the Indian Cable Company's products as the published results of tenders have shown that their prices are usually only a few per cent. below "C. M. A." prices.

(6) The local markets are stocked with low grade wires intended for House wiring, the quality of which is so inferior that their use constitutes a serious menace to the safety of buildings where they are employed and owing to the presence of these inferior and low priced wires, it is increasingly difficult for supply undertakings who carry out installation work and use "C. M. A." Grade cables, to obtain orders for this class of installation.

(7) In this market, where price is essentially the deciding factor, some protection is necessary against the use of these low priced, low quality wires and cables rather than protection against the use of the highest grade manufactured, namely, "C. M. A." Grade wires and cables.

We trust that when the enquiry is held the above points will have the serious consideration of the Tariff Board before any further protection is afforded to the manufacture of electric wires and cables in India.

### **Burma Corporation Ltd., Rangoon.**

*Letter dated the 15th July, 1931.*

With reference to the Government of India, Commerce Department, Resolution (Tariffs) No. 707-T. (1), dated 11th May, 1931, referring to thy Tariff Board for enquiry and report an application by the Indian Cable Co., Ltd., Calcutta, for protection of the manufacture of electric wires and cables, other than paper insulated cables, we desire to register a protest against protection in any form being granted to the manufacture in India of electric wires and cables.

2. A Tariff which increases the cost of materials is detrimental to the interests of consumers generally and to the electrical development of the country.

3. We would therefore advocate the abolition of the existing 20 per cent. *ad valorem* duty on imported wires and cables, as the tendency of such a duty is to lower the quality of the materials imported.

4. In view of the importance of the factor of safety as applied to the use of electricity we would urge that attention should be given to the safeguarding of the consumers' interests by the introduction of legislation to protect them from the dangers arising from the importation of low quality and unsafe wires and cables.

### Municipal Council, Ootacamund.

*Letter dated the 16th July, 1931.*

With reference to your notices in the *Indian Trade Journal* of May 21st and May 28th, I have the honour to submit my views as I am interested in the electrical development in India.

(1) I am not in favour of granting protection for the Indian Cable Company so long as they manufacture wires, cables and bare copper wire to the C. M. A. standard and according to the B. E. S. A. specification.

(2) In the interests of consumers and the electrical development in this country the present protection afforded to the Indian Cable of 20 per cent. assessment *ad valorem* on imported wires should be abolished. They can sell their cable at a cheaper rate than the Foreign companies, as labour in India is cheaper than in other countries and as they can import their principal raw materials free of duty. Further it does not seem to be fair that while machinery and power cables to assist the electrical undertakings should be assessed duty free, the type of wire which the consumer requires for house wiring should be assessed at 20 (twenty) per cent. duty.

(3) Any protective duty placed on Hard Drawn Bare copper wire would place a burden on consumers and arrest development of electrical undertakings. Most of the licensees carry out their distribution with overhead lines and the mains require half the capital cost. One-fourth of the capital cost is spent on bare copper wire. An import duty would be prejudicial to the advancement of electrical undertaking.

(4) In the interests of consumers it is necessary that legislation should be introduced protecting them from poor quality and unsafe wires and cables.

### Lodna Colliery Company (1920), Ltd.

*Letter dated the 17th July, 1931.*

Messrs. W. T. Henley's Telegraph Works Co., Ltd., have sent us a copy of their letter dated the 24th June last to your address and as large users of electric cables we may state that we are in complete agreement with the contents thereof.

We are of opinion that to have imported cables and wires tested and stamped "Guaranteed to B. E. S. A. Standard" is a desirable alteration to the existing Act, and if the present Act or Regulations are altered to enforce a high standard of imported cables and wires, this would remove the Indian Cable Company's competitors who sell under their prices, and should also give them every chance to increase their sales, as they would still be selling a guaranteed article at a price not possible by the importers of a similar class of goods.

### Messrs. Saxby and Farmer (India), Ltd., Calcutta.

*Letter No. 5987-L/1-W. W., dated the 17th July, 1931.*

We write with reference to your notices in the *Indian Trade Journal* of May the 21st and of May the 28th, 1931.

Feeling that brevity will commend itself to you we lay our views herewith before you in the following eleven points—

(1) We are interested in the question as manufacturers of Modern Power Signalling for Railways which plant we manufacture locally.

(2) Cable represents 30 per cent. of the value of any supply we make in this connection.

(3) A high grade Cable is essential for these Power Signalling Installations- as the failure of a cable would result in loss of life to people carried on Trains which latter are controlled by our Power Signalling Installations.

(4) Our experience has taught us that Continental Cable is unreliable for this purpose and that only high grade Cable made by English manufacturers under C. A. M. specification is safe to instal for this purpose.

(5) We understand that the Indian Cable Company are endeavouring to make cable up to the C. M. A. specification and that laboratory tests show they have succeeded but we hold that a time test of endurance is absolutely necessary before their supplies can be fully accepted as equalling C. M. A. quality this time factor has so far been denied to the Indian Cable Company through no fault of theirs.

(6) Cheap Cable of Continental make said to be equal to C. M. A. imported into India is to our mind an important factor impeding the financial success of the business of the Indian Cable Company.

(7) If the price of Cable is increased by higher imported duties it will adversely re-act on the progress now being made in modernising Railways in India where electricity is becoming a real necessary to this end.

(8) Our business in Power Signalling for Railways would be adversely affected by any increase in the price of cable and would probably in consequence call for a reduction of our establishment and in the number of Indian Workmen which we are now able to employ in our well equipped Works at Calcutta giving employment in normal times of business activity to 800 or 900 men and which is capable of employing a larger number.

(9) There is no better tonic for the manufacturer than healthy competition whether from local sources or from abroad, it should induce him to explore every channel of economy coupled with efficiency to meet the situation and our experience has taught us that Indian labour under good management is capable, by virtue of its cheapness to hold its own in the matter of cost in production full consideration being given to the question of greater overhead charges inseparable from manufacture of high grade commodities in this country.

(10) We suggest that if a higher rate of Duty is imposed on imported Cable of inferior make it would have the effect desired by the Indian Cable Company namely of eliminating cheap and inferior Cables from the Indian market while still leaving the healthy and stimulating competition of imported Cable of high grade such as they manufacture themselves.

(11) We hope that the Tariff Board will fully satisfy themselves on the points we have raised before they increased the Duty on Cables and thus lay themselves open to do harm to other enterprises in India and particularly who, like ourselves, are dependent upon a supply of high grade Cable at a reasonable cost in order to keep their Works in full production.

### **The Eastern Electric Light and Power Company, Bombay.**

(1) *Letter dated the 17th July, 1931.*

With reference to the protection to the Indian Cable Co., Ltd., we ourselves being the Sole Agents of Furukawa (Japan) Wires and Cables, take this opportunity to express our views as under in the light of our own longstanding experience of the line, from which you will please see that the proposition is in no way beneficial to the country but on the contrary detrimental to the interests of the consumers.

(I) (a, b, c) It does not at all satisfy all the primary conditions laid down by the Indian Fiscal Commission, 1920. The Industry does not possess the main advantage of having an abundant supply of raw materials like rubber and copper from India, though facilities for cheap power and labour do exist.



(II) One cannot assert for certain whether the present Company will work the Ghastilla Mines profitably against the world's competition in copper. It is essential that The Indian Cable Co., Ltd., may be asked to submit statistical reports of the Mines, stating grounds whereon they base their expectations.

From the Sea Borne Trade Report we could learn that the total annual import of Wires and Cable in India amounts to the value of about Rupees One Crore against which the Company's annual products come to the value of about four lacs. The taxation proposed therefore is unproportionate and in excess of the actual annual output of the Company. Instead of the protective duty the best alternative that could be suggested is the special concession to the Company in freight to enable them to stand the foreign competition (See Clause X).

Besides, the suggestion of the levy of duty itself is partial. Rupee one per coil will work out a higher percentage on the Continental wires than C. M. A. ones; e.g., Rupee one on a Coil of 1/18 Continental V. I. R. wire costing Rs. 3 will come to 33 $\frac{1}{3}$ rd per cent. whereas C. M. A. coil of a similar wire costing Rs. 6-3 will work out at 15 per cent. Similarly, a Continental 1/18 Cab tyre wire coil costing Rs. 6 will work out 15 per cent. duty whilst that of C. M. A. costing Rs. 21.7 will come to about 5 per cent. only.

(III) Naturally, any additional taxation will add to the cost of the Cables, etc., and the Supply Companies will therefore resort to recoup the said increase in the cost of cable by way of either increasing their charges of laying Mains or by soaring up their energy rates with the result that the Consumers, i.e., the Public shall have to bear the brunt.

(IV) Of course, as it is, the Telegraph wires and Cables are subjected to a duty of 20 per cent. The additional protective duty will therefore adversely affect the prices further.

(V) We are interested in the imports of Furukawa Wires and Cables of which we hold Sole Agency. Presently, of course, our rates do not come in conflict with those of the Indian Cable Company as the rates of the latter are based on C. M. A. Standard prices.

(VI) The Statement of prices, etc., is enclosed herewith.

(VII) We have already stated in Clause V that the Indian Cable Co.'s rates are higher than ours at present.

(VIII) It is up to them to prove that their Works are sufficiently large as an economic unit of production, etc. May we suggest that they may submit us their complete reports regarding their Works to enable us to form our opinion on the subject.

(IX) We are unable to express our opinion regarding the quality of their products as their stuff is not known in the local market. Their quality and rates, so far as our information goes, are in level with C. M. A.

(X) The Geographical situation of the Company is such that the foreign Import of Wires and Cables will be cheaper than the supply of the Company's products at various up-country destinations on account of the heavy item of Railway freight expenses.

(XI) In the advent of time, the demand for wires and cables is likely to increase steadily in sympathy with the development of electricity and the proposed protection will therefore act as a spoke in the wheel of the progress of such developments on account of the protective duty on the imported wires and cables.

(XII) Estimation of the market in India at present—

*(Consumption of different wires in percentage.)*

- |  |                    |
|--|--------------------|
| (1) Rubber Insulated wires and Cables—                         |                    |
| (a) Less than 1/80th sq. in. . . . .                           | 80 to 85 per cent. |
| (b) Not less than 1/80th sq. in. . . . .                       | 15 to 20 per cent. |
| (2) Bare Copper Wire other than Telegraph and Telephone Wires— |                    |
| (a) Less than 1/80th sq. in. . . . .                           | 10 to 15 per cent. |
| (b) Not less than 1/80th sq. in. . . . .                       | 85 to 90 per cent. |

## (3) Telegraph and Telephone Wires and Cables—

- (a) Less than 1/80th sq. in. . . . . 80 to 85 per cent.  
 (b) Not less than 1/80th sq. in. . . . . 15 to 20 per cent.

Over and above the information submitted by us hereabove, we would suggest the usual examination of the interested persons by Commission, which would, we are sanguine, elicit more important points for your information.

Size.	Type.	C.I.F.		Duty.	Landing and C.L.G.
		Per 100 yds.			
	Meg.	Rs.	A. P.	Per cent.	Per cent.
1/18 V. I. R. . . . .	600	3	0 0	20	1
3/22 " " " " " " . . . . .	600	4	10 0	20	1
1/16 " " " " " " . . . . .	600	4	14 0	20	1
3/20 " " " " " " . . . . .	600	4	12 0	20	1
7/22 " " " " " " . . . . .	600	7	12 0	20	1
7/20 " " " " " " . . . . .	600	10	3 0	20	1
7/18 " " " " " " . . . . .	600	14	5 0	20	1
35/40 Flex. Cot. . . . .	600	4	2 0	20	1
1/18 S. C. Tyre . . . . .	600	7	0 0	20	1
3/22 " " " " " " . . . . .	600	8	0 0	20	1
1/16 " " " " " " . . . . .	600	8	8 0	20	1
3/20 " " " " " " . . . . .	600	9	0 0	20	1
7/22 " " " " " " . . . . .	600	11	8 0	20	1
7/20 " " " " " " . . . . .	600	15	0 0	20	1
7/18 " " " " " " . . . . .	600	22	0 0	20	1
1/18 L. C. Twin . . . . .	600	15	0 0	20	1
3/22 " " " " " " . . . . .	600	18	0 0	20	1
1/16 " " " " " " . . . . .	600	20	0 0	20	1
3/20 " " " " " " . . . . .	600	21	8 0	20	1
7/22 " " " " " " . . . . .	600	25	0 0	20	1
7/20 " " " " " " . . . . .	600	34	0 0	20	1
7/18 " " " " " " . . . . .	600	42	0 0	20	1

*Hard drawn bare copper wires.*

Per lb.

	Rs. a. p.	Rs. a. p.		
H. D. B. C. Wires from Nos. 4/0 to 10 S. W. G.	0 5 3	to 0 6 3	Free.	1 ½
H. D. B. C. Wires from Nos. 12 to 16 S. W. G.	0 6 3	to 0 7 3	20	1 ¼

## (2) Letter dated the 23rd July, 1931, from the Eastern Electric Light and Power Company, Bombay.

In continuation of our report of the 17th instant we beg to inform you that we have this day received from our Makers the necessary detailed statistics which we submit herewith in support of our proposition conveyed in paragraph X of our said report.

It will be now clear that the cost of manufacturing Wires and Cables averages about 62 per cent. whereas the balance covers Packing and Forwarding charges from Works to Docks, Insurance, Steamer Freight, Agents' commission and Makers' profit.

It is therefore understood that on the same basis of cost, The Indian Cable Co., Ltd., have the advantage of about 30 per cent. (after allowing 5 per cent. for packing) over the Foreign imported stuff, and a further 20 per cent. in duty.

We can therefore conclude that looking to the Geographical situation of the Company, the item of Freight may be proving adverse to them and as such it is advisable that they may be allowed some substantial concession in Freight alike Messrs. Tata Iron and Steel Co., Ltd., and others, instead of imposing any protective duty on the Foreign imported stuff.

*Statistics of the manufacture of wires and cables as received from Messrs. The Furukawa Electric Co., Ltd.*

	V.I.R. 1-18.	Twin L.C. 1-18.	Single C.T.S. 1-18.	Cotton flex 14-36.
	Per cent.	Per cent.	Per cent.	Per cent.
Raw materials (copper, lead, rubber, braiding, etc.).	49	45	37	46
Labour . . . . .	18	12	26	18
	—	—	—	—
	67	57	63	64
	—	—	—	—
Balance being packing, forwarding charges from Works to Docks, insurance, freight, agent's commission and Maker's Profit.	33	43	37	36

### **Messrs. Macneill Co., Calcutta.**

*Letter dated the 18th July, 1931.*

In connection with this enquiry we wish to take the opportunity of drawing attention to the need of a definite standard being laid down, to which all imports of electric wires and cables into this country should comply. At present, through the absence of any legislation on this point electric wires and cables of a very low quality are being placed on the market. These wires have a ready sale owing to their very low price, but in many cases the quality is so poor as to make the wires unsafe in use. In particular we wish to stress the danger from fire, etc., that might occur in the event of such wiring being installed on any seagoing or inland steamer carrying heavy passenger traffic and on this account we submit that the consumer needs protection. The introduction of a recognised standard to which all imported wires and cables must comply, would we think prove of great assistance to the Indian Cable Co., and possibly obviate the necessity of further protection.

### **British Indian Electric Committee.**

A.—WRITTEN.

*Letter from Mr. J. Parkinson, Acting Agent, Calcutta Electric Supply Corporation, Ltd., as Representative of the British Indian Electric Committee, dated 25th July, 1931.*

I have the honour to refer to Resolution No. 707-T. (1) of the Government of India (Department of Commerce), dated the 11th of May, 1931, and more particularly to paragraph 3 of the same and in accordance with the terms of the said paragraph to address to your Board the following representation touching the abovementioned application of the Indian Cable Co.

The representation hereunder more particularly set forth is made at the instance of the British Indian Electric Committee, which, as your Board will probably be aware, comprehends the interests of the following concerns, all of them directly engaged in the business of generation and distributing electrical energy in some form or other in this country:—

1. The Calcutta Electric Supply Corporation, Ltd., Calcuta.
2. The Karachi Electric Supply Corporation, Ltd., Karachi.
3. Dacca Electric Supply Co., Ltd.
4. Patna Electric Supply Co., Ltd.
5. Bhagalpur Electric Supply Co., Ltd.
6. Muzafferpore Electric Supply Co., Ltd.
7. Cuttack Electric Supply Co., Ltd.
8. Shahjahanpur Electric Supply Co., Ltd.
9. Mirzapur Electric Supply Co., Ltd.
10. Mangalore Electric Supply Co., Ltd.
11. Tinnevely-Tuticorin Electric Supply Co., Ltd.
12. Salem-Erode Electricity Distribution Co., Ltd.
13. The Bombay Electric Supply & Tramways Co., Ltd., Bombay.
14. Ahmedabad Electric Supply Co., Ltd.
15. Surat Electric Supply Co., Ltd.
16. Bombay & Suburban Electric Supply Co., Ltd.
17. The Madras Electric Supply Corporation, Ltd., Madras.
18. The Rangoon Electric Tramway & Supply Co., Ltd., Rangoon.
19. The Calcutta Tramways Co., Ltd., Calcutta.
20. The Delhi Electric Supply & Traction Co., Ltd., Delhi.
21. The Burmah Electric Supply Co., Ltd., Mandalay.
22. The Madras Electric Tramways (1904), Ltd., Madras.
23. The Cawnpore Electric Supply Corporation, Ltd., Cawnpore.

Some idea of the magnitude and importance of the interest in British India which my Committee represents may be gathered from the following figures:—

The total number of employees of whole of the Companies abovenamed amounts to:—over 20,000.

The total number of consumers in British India amounts to:—about 150,000.

*Introductory.*—From no other source perhaps could your Board more readily and in a more concentrated form obtain the necessary data for estimating the effect of the particular enhancements proposed upon the public interests involved. For I am to point out that the public as consumers are in no other tangible manner to be represented before your board with reference to recommendations you would be called upon to make. I am to say that in pressing the considerations hereunder set forth my Committee is highly sensible of the responsibility which thus devolves upon it. At the same time it needs no argument to support the proposition that where, as here in India, the public at large has yet to be educated to a proper recognition of all that electrical energy can achieve towards developing the country and raising the standard of individual health and comfort, the

interests of the public and those of the distributing agents concerned in serving it are really identical.

Accordingly I am to submit that the public interest demands that the proposals of the Indian Cable Co. should be tested from several well-defined angles of vision.

*The case for the Indian Cable Co.*—It would be little less than impertinent at this stage of the Board's activities to enumerate those principles which professed economists and enlightened commercial opinion all over the world agree in applying as tests of the propriety of introducing protective tariffs. But your Board has been at pains to call attention in certain instances to what in that regard has been laid down by the Indian Fiscal Commission of 1920.

How far the Indian Cable Co. has by the materials already submitted by it to your Board purported to bring itself within the conditions laid down by that Commission my Committee has at present no means of knowing. There have been, it is true, certain letters addressed by the Indian Cable Co. to other concerns interested in the controversy which the Indian Cable Co. has raised. But such of those letters as have been communicated to myself as the representative in India of the British Indian Electrical Committee are couched in such vague terms as to afford no practical basis for discussion.

In this connection I am to say that my Committee is not without hope that the data furnished to your Board by the Indian Cable Co. in support of its present application may be communicated to me before the Board assembles to take oral evidence. For it is the wish of my Committee to be represented before your Board on that occasion and it desires to be ready with such criticism of the Indian Cable Co.'s proposals and of the data submitted in their support as might seem to be useful and pertinent to offer.

Being unable for the reasons above stated to offer any such criticism at this stage my Committee contents itself for the moment by observing upon this aspect of the matter, that, so far as may be gathered from the information made available to the public during the seven years in which the Indian Cable Co. had been in existence, the concern is not one which is entitled to any further protection. Indeed, my Committee, as at present advised, inclines to the view that the policy of protecting it to the extent this Company has already enjoyed has proved a mistaken policy and one which has merely stood in the way of that development of electrical utility services which it should be the aim of Government to increase rather than retard.

*Effects anticipated.*—In what follows therefore my Committee will confine itself to stating as succinctly and briefly as is consistent with clearness what, in its considered opinion, would be the inevitable effect of the proposed tariffs upon the distributing agencies in India and upon the public interest which those agencies subserves.

*Interest of consumers generally.*—In this connection I may be allowed to point out that the public interest in this controversy may be considered primarily from two points of view; the direct interest of individual consumers, and the indirect interest of the public at large as tax-payers. Both points of view yield a common result in at least one particular. The needs of the community require electricity to be cheap and its distribution to be safe. The two view points abovenamed do however yield slightly different results in another direction. This may best be expressed by observing that while the individual private consumer, qua-private consumer, will be sufficiently well served if he gets cheap electricity safely conveyed; regarded as a tax-payer his interests are inevitably bound up with those of every Government department and Government enterprise in which electrical energy in any form is either generated or consumed. Within the category of tax-payers the Supply Co.'s themselves are included and consequently my Committee considers that the latter aspect of the public interest involved

in this tariff controversy is one to which it should not fail to call your Board's attention.

*Government concerns.*—For the purpose of the argument which follows, I may be permitted to tabulate the undermentioned heads under which the topic of the tax-payers' interest in the controversy may be approached. Electrical energy is used and/or generated in connection with (1) official residences, (2) administrative and judicial offices, (3) Police Barracks, (4) Prisons, (5) Hospitals (including asylums), (6) Military, Naval and Air Force establishments—including the provisions of stores for the maintenance of H. M.'s ships, Pilot and Survey vessels in peace and for mobilisation, (7) Docks and Harbours and all other Port establishments administered by Statutory Commissions, (8) Government Factories and Arsenals, (9) Landing-grounds in which Government may be interested though used in peace in connection with civil aviation, (10) a considerable area under semi-fortification in the region of the North-West Frontier of India.

*Government-owned Railways.*—Government is moreover a large-scale consumer of electrical energy by reason of its proprietary interests in the greater part of the Railway systems of the Peninsula. Those systems are every one of them in need of a more intensive use of electrical energy which nothing but financial difficulties retard, difficulties which cheaper materials would do much to remove.

*Stores.*—Now it is upon capital account that this financial difficulty in regard to material is made manifest. My Committee is under the impression that the public at large is unaware of the narrow margin of safety which, purely for reasons of economy, Government maintains in the matter of reserved stores of cable. Distributing companies in this country have by experience learnt that climatic conditions peculiar to the tropics necessitate the maintenance of a larger reserve than would be necessary in more temperate zones.

Doubtless the Indian Stores Department will be represented before your Board during the later stage of its investigation into the merits of the Indian Cable Co.'s present application. But my Committee though primarily concerned with the interests of the Industrial and private consumer felt that no survey of the public interests as a whole would be complete without a reference to the policy of Government in the matter of reserve stores and the reasons which my Committee believes to lie behind that policy.

*Industrial and other consumers.*—Turning to those consumers with which my Committee are more immediately concerned it goes without saying that all such large scale consumers of electrical energy as tramway undertakings and railway companies, as also mining and all other industrial enterprises, are preeminently interested to secure safe and cheap distribution of power. It follows that reliability and durability of conductors is as important to them as is the question of cost. But, in fact the ordinary household consumer is just as much interested to secure these ends: and not the less so because he is too often ill-informed and consequently less able than is the head of a large industrial undertaking to criticise the policy of Government in relation to this matter. Did the ordinary Indian house-holder, the small Indian industrialist and the small retailer possess a like degree of general knowledge of what can be done to bring cheap and safe electrical energy to the service of the community, the Government of India, as it seems to my Committee, would long ago have been forced to abandon altogether the policy of taxing imported electrical appliances and imported electrical materials.

*Agriculture.*—Of what practical value my Committee asks, are those serious and well-considered recommendations of the Royal Commission on Indian Agriculture if the present policy of Government is to be persisted in? For even a demonstration of what electricity has elsewhere achieved in the direction recommended can avail nothing so long as the trade and commercial interests concerned continue to be burdened by these particular tariffs.

*Cost of material.*—The foregoing considerations lead directly to the topic of costs. It should be manifest, my Committee thinks, that were these protective tariffs to be reduced or better still removed altogether the cost of imported material would be correspondingly fall. The most important result of a fall in the price of the higher grade insulated material would be that such material would be brought within the purchasing power of the relatively small consumer. The position to-day is quite otherwise. For the low purchasing power of the average consumer coupled with the high cost of reliable cable has let into the market very large quantities of low-priced cable for the most part of very inferior quality.

*Value.*—The disadvantages of a low grade of cable may be felt in three ways (i) necessity for constant repair or replacement, (ii) failure or supply leading to temporary or relatively prolonged interruption, (iii) damage to life or property. The first of these heads needs no comment; the second, though it may seem to the individual consumer to represent little more than inconvenience yet when such incidents are measured in bulk they are seem to represent what considered in terms of potential sales of units of energy, is a far from negligible loss to the distributing agencies concerned; while the third head of disadvantages is, it is thought, at once too obvious and too grave to need any embellishment. But those considerations do not exhaust the topic of loss to the public by reason of circuit interruption arising from the use of inferior material. An hour or two of interruption to a small consumer may be difficult to estimate in terms of wealth; but it is otherwise with a large industrial undertaking.

Now the standard quality of insulated cable upon which those electrical supply companies represented upon my Committee have come to rely is that associated with the C. M. A. mark. Undoubtedly the present tariff is partly responsible for the cost to the Indian consumer of imported cable up to this standard or to anything like it being as high as it is to-day. The Indian Cable Co. itself which claims to be putting upon the market a cable yielding the same laboratory results, offers that cable to the public at only a shade below the figure ruling for the imported high-grade material. The price of this imported material of C. M. A. quality has shown considerable fluctuations in the past corresponding to the fluctuations in the world price of copper. But it will be observed that despite the advantages which the Indian Cable Co. has enjoyed both ways (namely by a relatively high protection against imported conductors together with permission to import anything it wants in the way of raw material free) it has systematically maintained a policy of keeping its prices only a shade below those at which the C. M. A. mark has been quoted in India. Consequently it cannot be said that the Company has done anything tangible to bring down the price of reputable cable in any form.

*Detailed effects foreseen.*—In these circumstances what reason is there to suppose that the public will be at all advantaged by any addition to the existing tariffs? Doubtless, the first effect of any such addition will be nothing more serious than the abandonment of the hoped for reduction in the price at which units of energy can be sold to the public. But the ensuing effect, dependent for its postponement purely upon the rate at which existing stocks are reduced, will inevitably be a rise in the cost of all high-grade cable to the Indian consumer. It is not for a moment to be believed that the Indian Cable Co. whose avowed object is to pay dividends will not contrive to participate in that rise. It may perhaps be noted in passing that the Indian Cable Company is far from being the only concern interested in the Electrical trade which is unable to satisfy its shareholders. Some 4 or 5 of the Supply Companies mentioned in the 1st paragraph of this letter have not paid a dividend. My Committee uses the words "all high-grade cable" advisedly, since the prices of aluminium varies in sympathy with that of copper. The public therefore will reap no advantage from any competition between the two metals primarily concerned.

(a) *Higher-grade cable.*—The Indian Cable Co. however, protests that its present application is not dictated by any desire to check the importation of high-grade cable. At first blush one would have thought otherwise for to do the Company justice it must surely be the imported high-grade cable with which the Company's best products are designed to compete. Nevertheless, the Company is at pains to assure its critics that its real aim is to check the importation of inferior cable which the unwary consumer is admittedly not only tempted to buy but which he is in fact buying, to an extent hardly compatible with the public safety.

(b) *Inferior cable.*—My Committee feels it to be demonstrable that the Indian Cable Co. is upon somewhat insecure ground when it claims that the imposition of a higher tariff will shut out the low-grade importation. The governing factor in such importation is low cost of production. Manufacturers so situated are ever difficult to dislodge by a mere temporary tariff; but if one thing plays into their hands more than anything else it is a policy which makes it more difficult for the higher grade article to find its way into the hands of consumers uninstructed, and therefore uncritical, as to quality. Indeed, once the importer of an inferior article has captured an uninstructed and unwary public by the attraction of his cheap prices, he has but to lower his quality yet again (if he cannot otherwise hold the advantage already gained by his low cost of production) and he will assuredly stay in the market and very possibly extend his influence.

*The real remedy.*—If in fact the Indian Cable Co. be genuinely disturbed by the importation of inferior cable, it has but to associate itself with the great majority of responsible electrical concerns in this country in pressing upon Government the adoption of the only real remedy: namely the testing of imports at the port of entry. The Government of India until recently had adopted this particular method of dealing with the evil: a method which has been in practice for a long time past in the other dominions where, as in America, the policy of Government is informed by a realisation that the development of the country's resources inevitably involves the taking of every measure whereby the provision of cheap electricity may be secured to all who stand in need of it.

(c) *Cheap cable generally.*—There are however certain repercussions to be expected if the tariffs now pressed for by the Indian Cable Co. should be finally brought into force. It cannot be said that, up to now, all the cheaper cables are of like inferiority. Certain manufacturers out of India have indeed contrived hitherto to give reasonable value for the price they quote. To some extent, therefore, they have been able to meet the demands of certain sections of the community. But, having regard to the narrow margin of profit which these manufacturers are now making, a further enhancement of import duty may so reduce or extinguish such profits that in order to keep in the Indian market at all these particular manufacturers may be tempted to lower the standard of quality, they have hitherto kept to and thus the volume of low-grade cable which the public would be tempted to use would be still further increased.

*Repercussion.*—It is moreover by no means inconceivable that where manufacturers find themselves at a disadvantage, that is to say find their profits diminished in respect of cables of a particular sectional area, they may seek to recoup themselves by quoting higher prices for cable of other sectional areas.

*Conclusion.*—Viewing the position of electrical concerns in this country, as does my Committee, it cannot conceive how any adequate apology could be offered for bolstering up a relatively small commercial enterprise at the expense of every other interest involved, especially where, as my Committee feels itself capable of demonstrating, the interest of the community at large both as consumers or as tax-payers, lies in a policy directly the opposite of that which the Indian Cable Co. seeks not only to continue but to continue in an aggravated form.



It is requested that any reply that the Board may see fit to make to this representation may be addressed to be undersigned care of the Calcutta Electric Supply Corporation, Ltd., No. 6, Old Post Office Street, Calcutta.

Enclosure No. 1.

(Copy.)

Burma Electric Supply Co., Ltd.  
Post Box No. 7.

No. 4272.

Mandalay, the 21st July, 1931.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding the grant of protection to the manufacture of Electric Wires and Cables in India, we are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee and we strongly protest against any increase in the Tariff.

Enclosure No. 2.

(Copy.)

Bombay Suburban Electric Supply, Ltd.

Killick Building,  
Home Street,  
Bombay, the 16th July, 1931.

No. BSE/935.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

Enclosure No. 3.

(Copy.)

Delhi Electric Supply & Traction Co., Ltd.

Post Office Box 18,  
Delhi, the 15th July 1931.

No. O.117.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

Enclosure No. 4.

(Copy.)

The Calcutta Tramways Co., Ltd.

7, Church Lane,  
Calcutta, the 16th July, 1931.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

Enclosure No. 5.

(Copy.)

The Ahmedabad Electricity Co., Ltd.

Killick Building,  
Home Street,  
Bombay, the 16th July, 1931.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

Enclosure No. 6.

(Copy.)

Octavius Steel & Co., Ltd.,  
Calcutta.

Calcutta, the 16th July, 1931.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to our letter of the 6th instant, and with reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires & Cables; as Managing Agents of the undernoted Companies, we strongly protest against any increase in the Tariff.

We are in full agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

Dacca Electric Supply Co., Ltd.  
Patna Electric Supply Co., Ltd.  
Bhagalpur Electric Supply Co., Ltd.  
Mozufferpore Electric Supply Co., Ltd.  
Cuttack Electric Supply Co., Ltd.  
Shahjahanpur Electric Supply Co., Ltd.  
Mirzapur Electric Supply Co., Ltd.  
Mangalore Electric Supply Co., Ltd.  
Tinnevely-Tuticorin Electric Supply Co., Ltd.  
Salem Erode Electricity Distribution Co., Ltd.

Enclosure No. 7.

(Copy.)

The Bombay Electric Supply and Tramways Co., Ltd.  
Please refer to No. 10159/31 in your reply.

Electric House,  
Post Fort, Bombay No. 1,  
16th July, 1931.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

Enclosure No. 8.

(Copy.)

The Surat Electricity Co., Ltd.  
Killick, Nixon & Co.,  
Managing Agents.

Killick Building,  
Home Street,  
Bombay, the 16th July, 1931.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

Enclosure No. 9.

(Copy.)

J. C. Bannerjee,  
Engineer, Builder & Contractor,  
Import & Export Merchant,  
20, Strand Road, Calcutta.

E/70.

Calcutta, the 29th July, 1931.

The Secretary,  
Indian Tariff Board,  
1, Council House Street,  
Calcutta.

With reference to your notification in the Indian Trade Journal of 21st and 28th May last we beg to submit below our observations on the subject of grant of protection to the wires and cables manufactured in this country :

- (a) The quantity of wires and cables manufactured in this country is only a small fraction of the total requirements of this country. Any protective tariff will have the effect of raising the prices

and penalising all users of wires and cables without securing any substantial benefit to the country.

- (b) The wires and cables manufactured in India are already protected by a 20 per cent. tariff. Necessity for further protection is an eloquent commentary on the inefficiency of management. We are strongly opposed to encouraging inefficiency for such encouragement will spell ultimate ruin for Indian industries.
- (c) Electrical development and production of cheap power on which development of all other industries have more or less to depend will be greatly jeopardized, if the price of copper wires and cables is artificially raised.
- (d) As a result of protection to Indian wires and cables and consequent check on development of Electrical Industries and import of all electrical goods, boilers, engines and other prime mover plants the revenue of Government is bound to decrease much more than can possibly be raised from tariff on copper wires.
- (e) Existing industries like manufacture of fans, regulators and other electrical goods in this country would be ruined by any rise in the price of copper wires as they already find it difficult to compete with imported articles and development of further electrical manufacturing industries would seriously be handicapped if not made impossible by a further rise in the price of wires and cables.
- (f) Any rise in the price of electrical wires and cables would ruin the business of wiring contractors.

In the above circumstances we hope you will do the country a real service by refusing to grant further protection to Indian cables and recommending the abolition of the protection already being given.

Enclosure No. 10.

(Copy.)

Martin & Co.,  
Managing Agents.

Electric Supply Dept.  
No. 12497.

United Provinces Electric Supply  
Co., Ltd.

Jubbulpore Electric Supply Co., Ltd.

Agra Electric Supply Co., Ltd.

Muttra Electric Supply Co., Ltd.

Benares Electric Light & Power Co.,  
Ltd.

Bareilly Electricity Supply Co., Ltd.

Upper Ganges Valley Electricity  
Supply Co., Ltd.

Upper Jumna Valley Electricity  
Supply Co., Ltd.

Saugor Electricity Supply Co., Ltd.

12, Mission Row, Calcutta,

27th July 1931.

CJB/DG.

The Secretary,  
Indian Tariff Board,  
1, Council House Street,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

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Enclosure No. 11.

(Copy.)

The Barrackpore Electric Supply Co., Ltd.  
Managing Agents, Kilburn & Co.,  
Fairlie House,  
4, Fairlie Place,  
Calcutta.

20th July, 1931.

Ref. G/16.

The Secretary,  
Tariff Board,  
Calcutta.

With reference to Resolution No. 707-T. (1) regarding protection to the manufacture of Electric Wires and Cables, we strongly protest against any increase in the Tariff.

We are fully in agreement with the views expressed in the petition submitted by the British Indian Electric Committee.

**THE BRITISH INDIAN ELECTRIC COMMITTEE.**

B.—ORAL.

**Evidence of Mr. J. PARKINSON, Mr. C. C. EASTGATE and Mr. O. M. MEARES recorded at Calcutta on Monday, the 24th August, 1931.**

*President.*—May I take it, gentlemen, that you are all members of the British India Electric Committee?

*Mr. Eastgate.*—Yes.

*President.*—So we can examine you on the basis that you represent practically the same point of view?

*Mr. Eastgate.*—Yes.

*President.*—The point which you make in your representation is that if protection is granted to the Indian Cable Company by means of an increased duty it would on the whole be ineffective for the reason that their main competition comes from the low grade cables which are imported into this country and if we increased the duty it would still make it possible for them to import these low grade cables and therefore the same competition would remain. You suggest, therefore, that if protection is considered, it should be granted by means of some method of control of low grade cables?

*Mr. Eastgate.*—Yes.

*President.*—The first point on which we should like information is this: If we are to suggest to Government that some form of control should be introduced, it would be necessary for you to give some evidence as to the danger which has actually been caused to the public by reason of the use of inferior cables. We have had several representations raising this point, but so far we have received little evidence as to the actual damage which has been caused, and if you could enlighten us on that point it would be helpful.

*Mr. Parkinson.*—May I be allowed to go into the history of this matter which made it possible for low grade cables to be imported into India? My own company has been operating now for 35 years. The Indian Electricity Act and the Indian Electricity Rules were first brought into operation in 1910 and therefore between the time the company commenced operation and the enforcement of the Indian Electricity Act the company operated on a very simple licence. Then when the Act was first made out and the rules were initiated, the rules were made as simple as possible for bare necessity of safety in order to encourage Indian workmen. The test laid down to control the standard of installations was very simple. At that time only cables of British manufacture were being imported into India and throughout the whole of the Electricity Act you will find nothing which is at all strict on the consumer and the idea of that has been to give every encouragement to the consumer and also to the Indian public. This has been phenomenal. The quality of cables that have been made by the C. M. A. makers between 1910 and 1914 was good. This constituted 99 per cent. of the cables made in England. Then just before the War mushroom firms sprang up in England and they commenced importing into this country and during the War Japanese and Continental firms got a chance to come in. The first effect was not so much on wires as on ceiling roses and switches of an inferior quality. This would explain the reason for the importation of the inferior material. During the monsoon, if you go round Calcutta, in many cases you put on a switch you get a small shock. I will just give you an example of what happens. The other day I went to a store and

I found cables manufactured by a British firm outside the Association. I casually selected one coil out of 84 coils and I sent that coil to the Indian Stores Department for testing, and this is the result of the test (handed in).

*President.*—"On examination the insulating wire and rubber conductors were found to have perished and they are now entirely inelastic and almost brittle. The present condition of the component of the conductors is poor owing to its being largely covered by black deposits which is presumably copper sulphite. The sample in its present condition is entirely unsuitable for service."

*Mr. Parkinson.*—This cable was manufactured on 14th January 1929 and was actually casually picked up by me in a store.

*President.*—That is British cable?

*Mr. Parkinson.*—Yes, labelled "Association Quality".

*Mr. Rahimtoola.*—Doesn't that give an impression that it is equal to the quality of cables manufactured by the members of the C. M. A.?

*Mr. Eastgate.*—That is the impression it tries to give.

*President.*—Have you any kind of information as to what proportion of the cables imported from England are made by people not members of the C. M. A.?

*Mr. Parkinson.*—I am afraid I have no information. It does not concern our Committee. We have not investigated that.

*Mr. Meares.*—I think Mr. Bland gave some information. It was not definite but I think he said the majority of cables made in England were made by members of the C. M. A.

*President.*—Can you tell me whether a system of control of the kind you propose has been adopted in any country except Australia?

*Mr. Parkinson.*—I believe it is in force in Canada but I am not sure.

*President.*—You are not in a position to state what form control takes in the States?

*Mr. Parkinson.*—I don't know whether that is done by an exorbitant tax or by an examination of the cable.

*President.*—A certain measure of control is provided for in the Electricity Act, is it not?

*Mr. Parkinson.*—That is really for very inferior quality of cables. In fact my Committee have considered the matter and intend to make an application to the Government of India to have the Indian Electricity Rules completely altered in order that the consumer may obtain greater security against the inferior article.

*President.*—If you take Rule 40-A the enforcement of which is left to local Governments, supposing it was made binding on the Local Governments would that give you the control you want?

*Mr. Parkinson.*—It will give control as regards workmanship but not as regards quality of material.

*President.*—If you take Rule 23, can't you as licensees enforce the control with which you are vested under this rule?

*Mr. Parkinson.*—We could do that but the condition under which the rule is operative is such that it can be easily overcome. It is not strict enough.

*President.*—What is the point of that rule which is not strict enough?

*Mr. Parkinson.*—You have to take Rules 23 and 24 together. Those are the rules for installation.

*President.*—"If at any time a licensee has reasons to believe that a leakage, likely injuriously to affect the use of energy by the licensee or by

other persons, exists in the premises of a consumer then the licensee may give the consumer reasonable notice in writing that he desires to inspect and test such wires and fittings belonging to the consumer as form part of the circuit." Can't you under that rule adopt whatever test you consider reasonable?

*Mr. Parkinson.*—We do adopt a test which it is in our power to do. If the leakage is beyond a certain figure we have power to cut off connection.

*Mr. Meares.*—These leakage rules are not made for the benefit of the consumer who has the leakage but for the benefit of other consumers. The whole idea is to enable the supplier to fulfil his obligation of maintaining a correct supply to all other consumers. In the last resort a defective installation can be cut off.

*Mr. Boag.*—It is really to prevent waste?

*Mr. Meares.*—It is not so much a question of waste.

*Mr. Parkinson.*—Supposing you have got leakage in this room, then there is defect in the supply outside this house and that may cause inconvenience as regards supply of power to other consumers.

*Mr. Boag.*—The idea is to prevent interruption in the supply to his neighbour?

*Mr. Parkinson.*—Yes.

*President.*—Supposing the Local Government decide to enforce Rule 40-A and they decide to make it a condition of licensing a contractor that he should use a particular minimum quality?

*Mr. Parkinson.*—Not only cables, but there are several other things, switches, ceiling roses, fuses, all sorts of things that have to be considered. We not only require power to supervise the workmanship in respect of cables but all the other materials which make up an installation.

*Mr. Rahimtoola.*—That sort of power is at present vested in the Local Governments?

*Mr. Parkinson.*—The only power Government have is the licensing of contractors.

*Mr. Rahimtoola.*—That is regarding the workmanship but not regarding the quality of wire?

*Mr. Parkinson.*—Take the cables imported into this country under C. M. A. labels: you can sell these labels at 12 annas each. We have an order in our stores that when a C. M. A. cable reel is opened the label attached is destroyed by a senior official.

*Mr. Rahimtoola.*—Supposing a contractor is in the habit of using materials which are definitely defective and are likely to be injurious, isn't there sufficient power under Rule 40-A for the Local Government to say that that man's licence should be stopped?

*Mr. Parkinson.*—That depends entirely on the Local Government.

*Mr. Meares.*—I think that was apparently not considered when the rule was worded, but it seems to me that that rule can be modified without any complicated procedure and adapted to include it. Its powers appear to be aimed at workmanship and not at material, but there is no reason why it should not be applied to material also.

*President.*—“Nothing shall be done except by a duly licensed electrical contractor and under the direct supervision of a person holding a certificate of competency issued by the Local Government.”

*Mr. Meares.*—That is a very wide statement. It leaves the Local Government apparently free to put in any terms and conditions. If they can do that then the whole point is covered.

*President.*—From that point of view what is the suggestion you would make regarding the amending of Rule 40-A which would bring this class of cases within its scope?



*Mr. Meares.*—I should like to suggest in the first place that very valuable evidence can be obtained from the Government Electrical Inspectors.

*President.*—If the Electrical Inspector who advises the Local Government advises that in regard to the issue of licences to contractors it must be an essential condition that the contractor must do his work with satisfactory materials, would that rule sufficiently cover the case?

*Mr. Meares.*—I think the Electrical Inspectors are probably the best persons to express an opinion as to the minimum standard of quality to be laid down under the act.

*President.*—The point I am trying to get at is this: in order to effect a better system of control is it really necessary to have a fresh rule? All that is necessary to my mind is that Local Governments should be better instructed to enforce the rules.

*Mr. Meares.*—I think legal opinion would have to be taken on this point.

*President.*—Supposing legal opinion accepted that interpretation then it would not be necessary to go further and adopt a system of test at the port of entry?

*Mr. Parkinson.*—If you had rules framed like the rules which are framed by the Institution of Electrical Engineers, that would be very desirable. Practically throughout Europe every house is covered by fire insurance. There is very little fire insurance in India. In Europe each Fire Insurance Company has very strict rules and these rules can be adapted for ordinary housewiring work which must give details of the wire, the thickness of insulation, etc., etc.

*President.*—Drawn up by whom?

*Mr. Parkinson.*—By the various authorities.

*Mr. Boag.*—What sanction have they?

*Mr. Parkinson.*—These rules are admitted by the British Engineering Standard Association.

*President.*—Supposing these rules are not observed, who is the person to see to it that these rules are observed?

*Mr. Meares.*—As far as I know, there is no regular sanction behind them.

*Mr. Parkinson.*—If you want to insure your house or your workshop, you must use only such wires as are approved by the Fire Insurance Companies.

*Mr. Boag.*—They will not insure your property unless it is wired according to these rules?

*Mr. Parkinson.*—That is the position. The rules are accepted as the lowest standard of safety and efficiency by the major portion of the Electrical Industry in England and therefore by Insurance and Supply Companies alike. The latter, in the public interest, decline to connect to a system which does not reach their accepted standard of efficiency.

*President.*—Supposing a cable of the kind that you sent to the I. S. D. was used in England, the only sanction behind it for non-employment of that kind of cable is what is derived indirectly through the rules of fire insurance companies.

*Mr. Parkinson.*—An ordinary inspector will come along and ask "whose wire you are using and where are the cables" and if the wire is not of the approved variety and if he sees something new, he will take a sample and test it.

*Mr. Rahimtoola.*—That means a representative of the Government,

*Mr. Parkinson.*—Not necessarily a Government representative, but of one of the authorised people, the Fire Insurance Company or the Supply Company.

*Mr. Rahimtoola.*—But I understand that the Fire Insurance Company man can come in only if your house is insured against fire by that particular Company.

*Mr. Parkinson.*—Yes.

*Mr. Rahimtoola.*—Otherwise these rules are no good.

*Mr. Parkinson.*—The principal suppliers draw up these rules.

*Mr. Rahimtoola.*—If they don't comply with the rules, there is no legal binding.

*Mr. Parkinson.*—No.

*Mr. Rahimtoola.*—Therefore I don't know how an officer can come and ask for the quality of the cable to be tested. Has he any right of entry?

*Mr. Parkinson.*—No right of entry at all.

*Mr. Rahimtoola.*—Except by the grace and permission of the house-owner.

*Mr. Parkinson.*—Yes.

*President.*—Of course the organisations on the technical side are very much better in England and public opinion has been educated so very much that probably official sanction is practically unnecessary.

*Mr. Meares.*—That is a very strong point.

*President.*—That is what it amounts to.

*Mr. Meares.*—There is a section of the English technical press which has a very wide circulation and deals with these matters from a popular standpoint and it has devoted much space in recent years to attempting to educate the public. There are also bodies like the Electrical Association for Women. All these things taken together have a profound influence on public opinion. That makes all the difference between England and India.

*Mr. Rahimtoola.*—These are kinds of propaganda.

*Mr. Meares.*—You are dealing there with a public who are rapidly being educated in electrical matters, and who, to some extent, are capable of looking after themselves. In this country it is not so.

*Mr. Parkinson.*—As far as the Indian rules are concerned, there is one test for the dry season and another for the monsoon season. In the dry season you can wire your house with inferior wire and it would pass the test.

*Mr. Meares.*—I think you are thinking that if a defective wire is put in a building the licensee under rule 23 will be able to detect the fact by tests, but unfortunately that is not so. You can with almost any rubbish get excellent results from the point of view of that rule in dry weather. Under monsoon conditions, on the other hand, it is sufficiently difficult to keep up to the standard laid down in the Rule even with the best material and workmanship. When examining a completed installation one could hardly do more than identify the type of cable and assess the quality from tests carried out on the same type before installation, and from actual experience with this type in service.

*President.*—Supposing it was part of the rule that a certain standard should be observed in the materials used, even then it would be so difficult to test the quality of the materials that the rules might be made ineffective?

*Mr. Meares.*—My point is that you could not, by the application of Rule 23 alone, verify and ensure the use of really good quality materials.

*President.*—You mean Rule 23 which places an obligation upon the licensee—the Corporation?

*Mr. Meares.*—Even when that rule is applied, it does not suffice to distinguish between an inferior cable and cable that is all right.

*President.*—Supposing the Corporation wanted to see whether the kind of wire used is satisfactory and it tests it at a particular season of the year

when the quality shows itself at its best and then when the season changes, the quality may be entirely different.

*Mr. Meares.*—Exactly. The inferior cable, although it may show a reasonable insulation test at first, deteriorates much more rapidly.

*President.*—Would the same consideration apply to Rule 40-A?

*Mr. Meares.*—Most emphatically so.

*President.*—Where they speak of the licensing of contractors?

*Mr. Meares.*—There are other methods besides testing by which one could have some sort of check. For instance if the makers of cables marked their names on the tape—this has been already suggested—it would have a salutary effect. This combined with testing would very nearly answer the purpose, if not quite.

*President.*—As far as I can understand the situation, there are two ways in which you can control. You can either control by inspection on the spot . . . .

*Mr. Meares.*—At what stage do you mean?

*President.*—Take Rules 23 and 40-A. You can either examine the kind of materials used in particular houses.

*Mr. Meares.*—Yes.

*President.*—A sort of house to house examination. Over against that, you could adopt a system of inspection at the port of entry. These are the two main systems of control.

*Mr. Meares.*—Quite.

*President.*—If you examine it at the port of entry, you settle the problem straightaway.

*Mr. Meares.*—Yes, if you do it quickly.

*President.*—And nothing unsatisfactory comes into this country and no further examination is necessary. The organisation required will be very much simpler. On the other hand if the enforcing of these rules depended on the inspection of wiring actually used in the house you would need a much more elaborate organisation.

*Mr. Meares.*—The Supply Company necessarily sees . . . . .

*President.*—I am thinking of 40-A.

*Mr. Parkinson.*—It is all the more essential that you should have good workmanship.

*President.*—What I am trying to suggest is this. If the Local Government decided before issuing a license they must look not merely to the standard of workmanship of the contractor but also to the standard of materials that are likely to be used, you would settle the problem, but you would require a far more detailed organisation than if you tested at the port of entry. That is the difference between the two.

*Mr. Parkinson.*—Yes.

*President.*—Have you any idea as to what the position is in Continental countries?

*Mr. Parkinson.*—On the Continent, for instance in Switzerland, they work under certain rules which are issued by Government and Government support these rules. These rules are supplied to Supply Companies and the Companies will say "if you wish to be connected with our system, your houses must be wired according to these conditions". We simply have to operate the other way round.

*President.*—You have no power to refuse?

*Mr. Parkinson.*—None whatever.

*Mr. Meares.*—Not only can we not refuse, but we can't disconnect either.

*Mr. Parkinson.*—During the present weather 25 per cent. of our installation tests were such that had to be rejected.

*President.*—What is the corresponding figure in a month like December?

*Mr. Parkinson.*—About 10 per cent.

*President.*—Whether you adopt a system of inspection on a house to house basis or a system of inspection by means of testing at the port of entry, in either case, the thing would have to be done not by legislation, but by the exercise of the rule making powers they have.

*Mr. Parkinson.*—Yes.

*President.*—Your suggestion is simply that the Government of India should be advised to make a new rule for the testing of wires at the ports of entry?

*Mr. Parkinson.*—That is right.

*President.*—No legislation is involved in that?

*Mr. Parkinson.*—No.

*President.*—Have you any figures as to accidents due to electricity in India?

*Mr. Parkinson.*—No, the Supply Company only deals with cases of their employees. We are not concerned with people outside. We are only concerned with our own employees.

*Mr. Meares.*—The Electrical Inspectors have got records of all those cases.

*President.*—You mean the Electrical Adviser to the Government of India?

*Mr. Meares.*—Yes.

*President.*—They have figures for accidents in the mines and so on and I was wondering whether they had kept a similar record for accidents due to electricity.

*Mr. Parkinson.*—Yes.

*Mr. Meares.*—The Electrical Inspectors will have that information.

*Mr. Parkinson.*—People do not realise that these rules are so weak. At present my Company will not give a supply to a busti.

*Mr. Meares.*—In view of Mr. Rahimtoola's remarks perhaps I may take this opportunity of saying the following:—

I think you were interested in the question regarding the complaint that public safety is affected by these inferior cables, and that you considered it rather surprising that the public do not hear of many electrical accidents. In the first place, statistically speaking that information is available from the Electrical Inspectors. Secondly, it has to be remembered that a situation although thoroughly dangerous requires the coincidence of a number of circumstances actually to produce an accident. Perhaps the best way I can illustrate my remarks is to quote to you a case which happened in Cawnpore. There is a private lane opening on to a main street in the bazaar, down which lane one of our consumers, who owns this property, had run wiring for a supply to his houses and for a private street lamp at the far end. The wiring was, in the opinion of the Electrical Inspector, so dangerous that after inspecting it he ordered it to be disconnected. Defective wire was hanging loosely close behind an iron gate below which was an open gutter, and the lane was generally crowded with children. Yet the installation was probably in a similar condition for weeks or even months before it was discovered, and it might have remained so for months more without a fatality. It was rightly regarded as dangerous because had the gate and wire come into contact, as they might easily have done at any time, a most ordinary action on the part of one of the children (such as touching the gate while standing in the gutter), might have caused loss of life. The installation could have been made perfectly safe with ordinary precautions as to materials and workmanship, and I think it is reasonable to say that danger exists in such cases even if the actual accidents are few.

*President.*—Does your proposal apply only to cables or to bare conductors also? Do you have as large a quantity of inferior bare conductors as you have inferior cables?

*Mr. Parkinson.*—No. I have come across very little inferior bare copper. We only use bigger size. I have seen very little inferior bare wire.

*President.*—If there is danger from the bare conductors, the thing would be under public scrutiny on the part of Corporations and so on.

*Mr. Parkinson.*—That is right.

*President.*—Therefore one is justified in assuming that the danger is much greater, and therefore the need for control is much greater, in the case of cables than in the case of bare conductors.

*Mr. Parkinson.*—Yes.

*President.*—Coming to the question of standards, what is your suggestion with regard to the standards which should be adopted by the Government in case it was decided to adopt a system of testing?

*Mr. Parkinson.*—That should be laid down by a Committee of Experts appointed by Government. In some cases the British standard might be too severe. In other countries other standards are in force. I do say it is essential to have a standard to work to.

*President.*—If the Government wanted to have a system of testing, it would be necessary to have an Electrical Committee to suggest such standards as are suitable for this country.

*Mr. Parkinson.*—Yes, that is essential.

*Mr. Rahimtoola.*—As regards clause 40-A, as far as I understand from this clause, nobody is allowed to do house wiring except under a license, is that correct?

*Mr. Parkinson.*—No. If the rule is enforced by the Local Government, that is correct. The question of granting a certificate of competence entirely rests with the Local Government.

*Mr. Rahimtoola.*—When they say that nobody is allowed to do the wiring work . . . . .

*Mr. Parkinson.*—In Bengal the rule has not been enforced.

*Mr. Meares.*—It is only in Bombay that it has been brought in.

*Mr. Rahimtoola.*—The present contractors in Calcutta or in Bengal have no license?

*Mr. Parkinson.*—No.

*Mr. Rahimtoola.*—This rule applies only when Government take power and that is so in Bombay?

*Mr. Parkinson.*—Yes.

*Mr. Rahimtoola.*—My reason for putting you that question was if Government did take that power, then the condition in this country would arise where there would be no contractor doing this work without a license.

*Mr. Parkinson.*—You aim at that.

*Mr. Rahimtoola.*—As I said, taking it for granted that this power is taken by all the Local Governments in India, then the condition would exist where there would be no contractor to do this work without a license.

*Mr. Parkinson.*—That is right.

*Mr. Rahimtoola.*—If a Local Government, before issuing a license—can easily attach a condition, viz., that the minimum test should be satisfied before a wire is put in the house would it meet your requirements?

*Mr. Parkinson.*—You cannot go beyond your Act.

*Mr. Rahimtoola.*—I think that one has got power to lay down the rules or conditions under which licence can be issued.

*Mr. Parkinson.*—But you cannot go beyond the rules laid down.

*Mr. Meares.*—Are you referring to the testing of cable or of the finished installation?

*Mr. Rahimtoola.*—Both—but mainly to cable.

*Mr. Meares.*—It cannot be done in the case of the finished installation.

*Mr. Rahimtoola.*—Even if the licence is given, the Governments of the various provinces cannot make rules regarding the quality of cable?

*Mr. Parkinson.*—No.

*Mr. Rahimtoola.*—As far as I know one of you gave us to understand that it was a point on which legal opinion was necessary.

*President.*—I think it is a moot question.

*Mr. Parkinson.*—We cannot lay down any higher standard for the finished installation.

*Mr. Rahimtoola.*—The reason why I was asking is this. It has been represented to us that even if a particular cable has been found satisfactory when it is tested at the port of entry, it has been found subsequently that it is losing its quality, that it deteriorates and that at the time you put in, it may not be in a safe condition.

*Mr. Meares.*—I think that if a standard were drawn up by the Indian Government with a view to admitting only cables that would give good service in India, the inferior cables could be largely eliminated by suitable tests.

*Mr. Rahimtoola.*—As far as I understand the best test is the test of experience or durability which cannot be applied with regard to the Indian Cable Company

*Mr. Meares.*—You can do a great deal with the other thing. You cannot make it 100 per cent. secure, but you can go a long way if all the cables are identified.

*Mr. Rahimtoola.*—At present as far as I am able to understand, your definition of a low grade cable is one which does not satisfy C. M. A. standard.

*Mr. Meares.*—No.

*Mr. Rahimtoola.*—What is the meaning of a low grade cable?

*Mr. Parkinson.*—A cable which does not comply with the standard laid down by the British Engineering Standard Association is a low grade cable.

*Mr. Rahimtoola.*—At present the Indian Cable Company make their cables up to a certain standard and that is a standard which is recognised by the C. M. A.?

*Mr. Parkinson.*—That is British Engineering Standard Association.

*Mr. Rahimtoola.*—Anything below that is a low grade?

*Mr. Parkinson.*—Yes.

*Mr. Rahimtoola.*—That is your definition of a low grade cable?

*Mr. Parkinson.*—Yes.

*Mr. Rahimtoola.*—It does not necessarily follow that the particular test which the Government of India may ultimately lay down with reference to the Continental cables should be the British Engineering Standard Association for India. You don't insist on that, do you?

*Mr. Parkinson.*—What I do suggest is that the standards should be laid down by a Committee of experts appointed by the Government of India. What those standards should be will be recommended by that Committee.

*Mr. Rahimtoola.*—That is perfectly true. It means that you are not asking that the test should be enforced?

*Mr. Parkinson.*—Which test?

*Mr. Rahimtoola.*—British Engineering Standard Association test.

*Mr. Parkinson.*—No.

*Mr. Rahimtoola.*—You want that point to be discussed by a Committee?

*Mr. Parkinson.*—Yes.

*Mr. Rahimtoola.*—And they should lay down the minimum tests which are necessary?

*Mr. Parkinson.*—Yes. We have our own views about that.

*Mr. Rahimtoola.*—As regards the point you raise about the interest of consumers generally you think that this would be encroaching on their freedom.

*Mr. Parkinson.*—Yes, it would be encroaching on the freedom of the consumer.

*Mr. Rahimtoola.*—You say that a cable may be bad but may serve for five years, and that unless several things take place together the house-owner may live quite comfortably without the least danger. Am I interpreting you correctly?

*Mr. Meares.*—Not quite.

*Mr. Rahimtoola.*—May I know exactly what your point is?

*Mr. Meares.*—In the first place much has been said about the public safety. The point that has not been brought out is the cost to the public. If the public get these cables at cheap prices, the cheapest varieties of cable cannot possibly have anything like the same life which a properly made cable will have. If the consumer puts that cable in, it may be all right in the first place but it is not really economical for the consumer.

*Mr. Rahimtoola.*—May I interrupt you? What you are saying concerns the pocket of the consumer, but I am talking of the life of the consumer.

*Mr. Meares.*—The two things combine. The consumer can consult his pocket and his safety at the same time. A cable which is so bad as to be likely to cause danger to his life or give him trouble is uneconomical. The point is that the consumer does not realise this. In the first place an enormous proportion of the work is done through contractors. The consumer has not the slightest idea of what is going on. If it goes wrong, it may be due to inferior wire, but there are many other things which may and do cause trouble.

*Mr. Rahimtoola.*—The moment he realises . . . . .

*Mr. Meares.*—He does not.

*Mr. Rahimtoola.*—The moment he realises that the wires and cables give him trouble and that he has got to remove them, which means he will have to pay doubly, he cannot continue to ignore it.

*Mr. Meares.*—He does not realise it.

*Mr. Rahimtoola.*—He must realise when he has got to have new installations.

*Mr. Meares.*—The contractor may produce an explanation which would probably disguise the facts. There are other circumstances besides bad quality material which lead to defective installations, one of which is the wrong choice of the material. You will find in the bazars in India any amount of ordinary flexible wires in exposed places like verandahs. Such wire is not intended for use in exposed situations and it cannot give good service no matter who is the maker. Things like that very seriously obscure the issue as to the quality of the cable. The question of workmanship also has an obscuring effect on the results of using inferior material.

*Mr. Rahimtoola.*—I am sorry I am unable to follow exactly what you mean. As far as I know there are two factors which count. One of them is the contractor. Now I cannot understand that a contractor can be so foolish as to prejudice his own plans and thereby destroy his own trade.

*Mr. Meares.*—I know the point you have in your mind. You think that the electrical contractors are purely electrical contractors whereas the majority of the very worst work is carried out by people who are primarily carpenters, plumbers and so on, and who have no real stake in the electrical industry.

*Mr. Rahimtoola.*—They do not disappear. They still exist and they can be got hold of by the individual if he chooses to do so.

*Mr. Meares.*—If he realises the technical defects.

*Mr. Rahimtoola.*—If he does not realise, the trouble never happens. I do not know why you should penalise a man and ask him to buy a costly material if the trouble never arises and the man lives comfortably. There must be some regular trouble in order to make people say that it is a nuisance and troublesome. Then there should be propaganda so that Government could step in for the sake of the consumer. If I live freely without any trouble for five or six years and I choose the cheap cable which gives me four or five years service just as I would buy a cheap motor and be content if it gave 7 or 8 years' service, I don't see why Government should make me go in for a more expensive cable or a car. There must be some reason for Government to step in. Government cannot say "You must use this because it is costlier".

*Mr. Meares.*—You are assuming that these things do not happen because they are not known to happen. The fact is that unlikely things do happen. The reason that direct evidence is lacking is probably that consumers are not anxious to publish the fact that they have been imposed upon by an inferior article, even if they realize it.

*Mr. Rahimtoola.*—I think you were present at our meeting yesterday and followed the discussion. The fact is that there is an increase in the imports of cables from the Continent and there is no definite instance of danger to the public has been given by any one who appeared before the Tariff Board. I think that Henley's representative told us that he was not in a position to give us any instance as far as he was concerned.

*Mr. Meares.*—The Electrical Inspectors are the people who could give you that information.

*Mr. Rahimtoola.*—You also are not in a position to do the same?

*Mr. Meares.*—By far the best evidence can be had from the Electrical Inspectors. They come across these troubles more than the Supply Companies do. It is from them you can get a true picture. Incidentally may I make a remark about your question "Why should one force on the consumer good quality material?"

*Mr. Rahimtoola.*—Any kind of quality.

*Mr. Meares.*—Looked at from the other point of view, it is hardly conceivable that enlightened opinion has insisted on this high standard without any purpose. The people who have drawn up these standards are all people who are interested in the development of electricity.

*President.*—Do you accept my colleague's analogy that the risk involved in the use of inferior cables is of the same character as the risk involved in the use of a cheap car?

*Mr. Meares.*—There is a very important distinction, but it is very difficult for me to prove that. I think that it is an undoubted fact that the consumer does not appreciate that it is an inferior cable.

*Mr. Rahimtoola.*—Therefore you want to force him to appreciate. He is bound to know of his ignorance sooner or later when his pocket is touched or when his life is unsafe. You need not teach him. There is no need to go to a school to learn these things. The moment he realises that he has to pay Rs. 100 more he will know it.

*Mr. Meares.*—It has been found necessary in every other country.

*Mr. Rahimtoola.*—That is no criterion.



*Mr. Meares.*—That is a very strong argument.

*President.*—The real point is not that there should be an introduction of a particular standard. What you really want is some standard which could be adhered to.

*Mr. Meares.*—I am not suggesting for one moment that the British or any other existing standard should be blindly followed.

*President.*—Electrical wires are a commodity in regard to which the adoption of a recognised standard is of public importance?

*Mr. Meares.*—Yes.

*President.*—That is your contention?

*Mr. Meares.*—Yes, and it is recognised all over the world.

*Mr. Rahimtoola.*—There are no tests in any of the countries in the world except—Australia and New Zealand.

*Mr. Parkinson.*—They are tested at the port of entry.

*Mr. Rahimtoola.*—Not in all countries?

*Mr. Parkinson.*—They have got rules like these.

*Mr. Meares.*—These rules compel the consumer to put in a reasonably good quality. It is much cheaper in the long run to put in a good quality material. That has been the experience in nearly all countries of the world.

*Mr. Rahimtoola.*—Your point of view is that the Tariff Board should consider two suggestions. One is that it should be done either by a set of rules which the Government of India might try by some method—by some Committee or by some other way—to enforce and the second is the prohibition at the port of entry of cables which do not conform to the standard which may be laid down for this country.

*Mr. Meares.*—The idea is to settle a standard and to find out the means of enforcing that standard. There is no necessity to adopt a standard from any other country.

*Mr. Rahimtoola.*—I think you have suggested that rules are made in England and there is no test at the port of entry and that something similar might be considered.

*Mr. Meares.*—I am afraid I do not follow.

*Mr. Rahimtoola.*—At present our attention has been drawn to the fact that the test done in England is not a test at the port of entry but from a set of rules which are more or less enforced by means of propaganda and the result is found satisfactory.

*Mr. Meares.*—Moderately.

*Mr. Rahimtoola.*—In England it has not proved satisfactory?

*Mr. Meares.*—It is getting more and more satisfactory. There is still room for progress and improvement.

*Mr. Rahimtoola.*—Why is the attention of the British Government not drawn to this fact?

*Mr. Eastgate.*—I should like to emphasise the fact that we are representing the interests of the British Indian Electric Committee, who are most intensely interested in the use and spread of electricity in this country. It is our livelihood, and we ourselves should not go out of our way to suggest anything which would touch the pockets of the consumer, without very good reasons.

*Mr. Parkinson.*—One point you must bear in mind. Very few people realise to what extent the electrical development has taken, and is taking place in this country. In America and other countries, it is judged by the number of units consumed per head of population. In Calcutta we have a dense area and our figures are about 53 units per head. The figure aimed at in America is 400 and the figure aimed at on the Continent is not less than 250 to 300. So, we have not even touched the fringe of that. If

legislation is going to interfere in any way with the development of the use of electricity we are up against a difficult proposition. On the one hand the Government of Bengal say when forwarding the report of the Bengal Smoke Nuisance Commission "We must arrange our rates to give the Indian consumer a cheap supply of current, so that he can do away with coal fires and charcoal braziers", and on the other we import heating and cooking apparatus and the Government put a 25 per cent. duty on all goods of that nature.

*President.*—Your point is as representatives of the British Indian Electric Committee you represent here directly the interests of the consumer?

*Mr. Eastgate.*—We do.

*President.*—It is to the interests of the consumer to have cables as cheap as possible.

*Mr. Eastgate.*—Yes.

*President.*—At the same time it is equally to the interests of the consumer that the cables he gets are cables that will not mean danger to the public safety.

*Mr. Eastgate.*—There are very few people in Calcutta who know what they are paying for leakage from an installation. Most of the wiring belongs to the landlords and not to the tenants. Many of the Indian houses you may know are owned by occupiers, but in Calcutta 75 per cent. of the householders do not own their wiring which belongs to the landlords and as tenants come and go they have to take over the wiring as it is. The tenant applies for the supply of electricity and he gets it. All the time the wiring is getting worse and worse.

*Mr. Rahimtoola.*—As regards your statement, Mr. Eastgate, I thought you were concerned more or less about supplying cheap power rather than going into the question of cheaper cables and your point of view, as I understood it, was that if there were good cables coming into the country you would be saved a lot of botheration in changing and rechanging and also safeguard the interest of the consumer?

*Mr. Eastgate.*—We would wish to safeguard the interest of the consumer by seeing that no leakage is taking place so as to prevent the use of electricity coming into disrepute. Take lamps from the Continent which are not manufactured to any standard at all: some of them consume 25 per cent. more electricity than a lamp made to an approved standard.

*Mr. Rahimtoola.*—You advise him not to put in these lamps?

*Mr. Parkinson.*—Yes.

*Mr. Rahimtoola.*—Why don't you do the same kind of propaganda as you do for wiring?

*Mr. Parkinson.*—We do.

*Mr. Rahimtoola.*—If a man is greatly bothered he would surely be inclined to listen to you because it is not in the interest of the houseowner to find tenants constantly creating trouble and then find the houses remaining vacant.

*Mr. Parkinson.*—What actually happens is that minor repairs are being continually done. We can produce records to show that but how to differentiate the inferior ones from the others, that is what we are up against.

*Mr. Rahimtoola.*—I want to know what is the exact meaning of this sentence—"How far the Indian Cable Company has by the materials already submitted by it to your Board purported to bring itself within the conditions laid down by that Commission my Committee has at present no means of knowing" and the second paragraph which runs as follows:—"There have been, it is true, certain letters addressed by the Indian Company to other concerns interested in the controversy which the Indian Cable Company has raised."

*Mr. Meares.*—The Indian Cable Company wrote to the Cawnpore Electric Supply Corporation when they realised that a certain amount of opposition was coming up against the proposal for protection, and they partially stated their case in this correspondence.

*Mr. Rahimtoola.*—Do I understand that they asked them to support their claim for protection?

*Mr. Meares.*—I wouldn't go as far as that. They merely stated their case to a certain extent.

*Mr. Rahimtoola.*—This implies that there is a certain thing which you don't like?

*Mr. Meares.*—No. The only objection we make there is that we have no means of judging on what the Indian Cable Company are basing their claim for protection.

*Mr. Boag.*—Your general position is that a tariff will not really benefit the Indian Cable Company?

*Mr. Parkinson.*—I should imagine that it would not, because the difference in price between the Indian Cable Company's cable and that of the Continental firms is so considerable that I don't think a tariff would be any good at all. That applies to insulated cables only.

*Mr. Boag.*—What about bare conductors?

*Mr. Parkinson.*—When you come to bare copper conductors and bare aluminium conductors you have got a larger field of manufacturers, and therefore you have possibly more importers of bare conductors than cables.

*Mr. Boag.*—There is not the same difference in price between the good copper conductor and the inferior conductor?

*Mr. Eastgate.*—There is not. It is practically all the same except with regard to that of Japanese manufacture.

*President.*—Your objection to a duty on bare conductors is generally that it would put up the price from the point of view of the consumer?

*Mr. Parkinson.*—Not necessarily, but it will be one of the grounds against any reduction in the cost of electrical power. Every supplier of electricity has to bring down his rates as low as he can. If you look at the records of the companies you will find that if the rates go up the demand goes down straightaway, so that any form of increased expenditure to which you are put would have a tendency to prevent any reduction in the rate.

*President.*—I am glad you put it in that way because a proposition in that form is easier to substantiate.

*Mr. Eastgate.*—I went through the figures this morning to see how far the statements given by the Indian Cable Company are consistent with facts. As far as my information goes a 20 per cent. import duty on un-insulated conductors would on the present price basis mean to a scheme with a block of Rs. 17 lakhs an extra capital expenditure of 2½ per cent. and an increase in the cost of current in the revenue account of .03 annas per unit. I worked these figures out in connection with the two biggest companies in which I am particularly interested and I find that the increased capital cost would actually be in one case 2.4 per cent. and in the other case 2 per cent.

*President.*—These companies that you are talking of, are they simply distributing licensees?

*Mr. Eastgate.*—No. They are generating licensees. These figures of mine worked out nearly three times as much as shown in the statements made by the Indian Cable Company, and there is also the increased cost of generation assuming that there is to be a gross revenue of 15 per cent. on the capital.

*President.*—If you take the transmission system of these companies, what would be the proportion of the cost of conductors to the whole transmission system?

*Mr. Eastgate.*—This percentage is worked out on the actual cost.

*President.*—Take your total capital expenditure in these companies.

*Mr. Eastgate.*—Out of a total capital expenditure in this particular case of Rs. 21 lakhs the mains cost nearly Rs. 6 lakhs, and out of the cost of these mains I find that the cost of copper conductors is about 40 per cent.

*President.*—That is Rs. 2,50,000. In most of the figures that we have seen, I think they make the cost of the conductors about 25 to 30 per cent. of the cost of the mains.

*Mr. Parkinson.*—That is low.

*Mr. Eastgate.*—I looked up a lot of figures this morning. One was above 50 per cent.; some were 30, others 35 and the average was 40 per cent. These are only overhead mains.

*Mr. Parkinson.*—We have the Bombay Company's costs in respect of some of their schemes.

*Mr. Eastgate.*—I represent very much smaller companies than you are dealing with and the proportion is different. I have another set of figures here (shown).

*President.*—Mr. Leake, this is one of the companies that you refer to and the total block expenditure that you give here is Rs. 17.9 lakhs; the total cost of mains is Rs. 5.70 lakhs, and then you deduct from that underground cables 10 per cent. and you get less underground cables cost of mains Rs. 5.13 lakhs. These figures don't seem to tally with those given by Mr. Eastgate? What was the date of the balance sheet from which you took it?

*Mr. Leake.*—March 1930 (Explains).

*President.*—What it means really is, their block after assuming depreciation stands at 17 lakhs, but actually if you wanted to construct a scheme of that kind you would have to spend Rs. 21 lakhs, but then the cost of conductors would come down correspondingly.

*Mr. Leake.*—These figures are actual figures. Our figures differ in that we took 30 per cent. as the value of our conductors and from the mains also we have deducted something for underground cables.

*Mr. Eastgate.*—I do not believe the total value of the underground cable would be anything like Rs. 50,000.

*Mr. Leake.*—I take it as Rs. 57,000.

*President.*—Mr. Eastgate, even on the figures as you work it out I don't think you can substantiate that there would be any increase in the cost.

*Mr. Eastgate.*—Even a decimal of an anna per unit comes to a fair amount of money on all units sold.

*President.*—That leads to the conclusion that it would be more and more difficult for the duty to be reduced.

*Mr. Parkinson.*—At the same time this is only one item. There are a tremendous number of items and if we are going to have protective tariff on everything the industry deals with we will be placed in a very serious position.

*Mr. Boag.*—You said just now that you represent a number of small companies. Is your position the same as that of the larger corporations with regard to the discussion we had about the testing of installations and cables?

*Mr. Eastgate.*—Yes, exactly the same. Everything which makes the use of electricity safe and popular is entirely in our interests and we will encourage it in every way we can.

*President.*—I want to make our position clear in this matter. We here are not experts in Electricity. This question has really come up before us in connection with the question of protection.

*Mr. Eastgate.*—Yes.

*President.*—But it so happens in this particular case it is contended that the protection of the Indian industry is bound up with the question of safeguarding the quality of cables coming to India. If free importation of low grade cables is allowed into this country, then one of two consequences will follow as far as the Indian Cable Industry is concerned. Either they will have to bring down the quality correspondingly in order to compete with these low priced cables and that would add to the total amount of danger. Or if that doesn't happen, the Indian Cable Industry is unable to carry on. I take it the suggestion that you put before us really amounts to this that, if on the facts we are satisfied, we should make a recommendation to Government that the question of revising the electricity rules with a view to the testing of cables at the ports of entry, should be undertaken and along with that also some standard should be laid down with reference to which the testing may be done.

*Mr. Parkinson.*—Yes.

*President.*—Since we, in the Tariff Board, are not experts, all that we can do is, if we are satisfied that a case is made out, to recommend to the Government of India that a suitable Committee be appointed to go into the whole question. There is nothing more that we are in a position to say.

*Mr. Parkinson.*—Yes.

*President.*—That is practically your suggestion?

*Mr. Parkinson.*—Yes.

*Mr. Meares.*—Before we adjourn, I should like to say a few words. The discussion has centred round the possibility of protecting the Indian Cable Company as to quality, but our intention, in the first place, was really to fight the protection if it was to be arranged in such a way as to increase the price of cable.

*President.*—That is a point which has been made before us in other representations too. That is a matter which we have already considered, that is to say, how far by means of an increase in the duty protection should be made effective for the Indian industry. That is really a moot question.

*Mr. Meares.*—Yes. So many things have come up. What the Indian Cable Company originally asked for was a duty on all the finished articles which tended to increase the price to the consumer. On the figures that were produced on the first day's evidence you agreed that increasing the duty on large cables up to 12½ per cent. would give the Indian Cable Company a return of Rs. 1·2 lakhs.

*President.*—We didn't take into account whether the capital was preference or ordinary. All that we did in that tentative calculation was to take a total figure of Rs. 15 lakhs as the capitalisation which would be required by a Cable Company of this capacity if they started to work here to-morrow.

*Mr. Meares.*—What about the arrears of profit and depreciation?

*President.*—That doesn't come into that question at all. The particular position of this Company does not come into the question of protection. The way in which we frame tariff rates has nothing whatever to do with the question whether a particular Company's profit or depreciation is in arrears or whether they are overcapitalised. These questions do not come into protection. What we do is to try and find out what is the capital expenditure required by a new Company starting operations. What we are concerned with is the development of the industry.

*Mr. Meares.*—The outcome of it is that protection may not be sufficient.

*Mr. Rahimtoola.*—Do I understand that you want to put on record that you are opposed to protection being granted to the Indian Cable Company.

*Mr. Parkinson.*—We are averse to protection being granted.

*Mr. Meares.*—I don't want to say that. I would rather qualify it in this way. We are with the Cable Company in wishing to see that inferior

cables do not come into the country in such quantities, but we are opposed to protection which will increase the price of copper wire or cable to the consumer.

*Mr. Rahimtoola.*—As far as cables are concerned, you are supporting their case for protection.

*Mr. Meares.*—They have got two proposals.

*Mr. Rahimtoola.*—You didn't follow the evidence which was given. They have put this as an alternative.

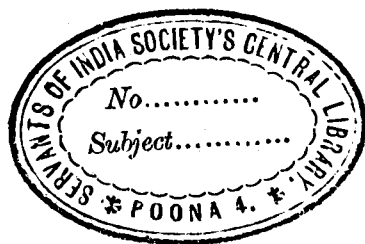
*Mr. Meares.*—We have agreed with the one alternative and rejected the other.

*Mr. Rahimtoola.*—The definite proposal which came from them afterwards was as far as cables are concerned, they wanted protection of the kind which you are now supporting, *viz.*, to test cables at the port of entry.

*Mr. Meares.*—As an alternative to duty.

*President.*—That is really the interesting part of the case. We could adopt a measure in this case for the protection of the industry which would also be from the point of view of the Electric Supply Corporation a measure for the benefit of the consumer. That is really how it works out.

*Mr. Meares.*—Yes.



### Holland Insulated Wire and Cable Works, Amsterdam.

Letter dated 27th August, 1931.

We were very pleased to receive your information about a telegram from your Consul General in Calcutta, advising that we can still send a written representation containing our views with regard to the application of the Indian Cable Co., Ltd., Calcutta, for protection to the manufacture of electric wires and cables other than paper insulated cables.

We are makers of rubber insulated wires and cables and are exporting regularly these products also to British India, where these articles for duty purposes are classified under Item 83, paying a duty of 20 per cent. *ad valorem*. This article reads as follows:—

“bare or insulated copper wires and cables, any one core of which, not being one specially designed as a pilot core, has a sectional area of less than one-eightieth part of a square inch, and wires and cables of other metals of not more than equivalent conductivity.”

and under 99-B, reading:—

“Rubber-insulated copper wires and cables, no core of which, other than one specially designed as a pilot core, has a sectional area of less than one-eightieth part of a square inch, whether made with any additional insulating or covering material or not.”

For these cables the duty is 5 per cent. *ad valorem*.

In this connection it may interest the Indian Government that here in Holland rubber insulated wires and cables that are classified in India under Item 83 pay a duty of 8 per cent., those classified in India under 99-B a duty of 5 per cent. So for that last item the duty here is the same as it is in India. For Item 83 however there is a large difference. If we take the selling price of rubber insulated wire and cable, we see that a large percentage of the total price—in many instances between 80 and 90 per cent. of the value—is the price paid by the manufacturer for the raw materials. These raw materials, copper, rubber and cotton, are world market articles, that are bought at the same price from the same suppliers, independent of the fact where the factory is situated. So if a factory by its imports in another country, where a local factory is making the same products, is handicapped by an import duty, the portion of the price representing the price of the raw materials cannot bear that duty. So that duty must be borne by the balance of the price, by the wages and by the profit. Although we have no exact figures about wages in the cable industry in India, we are quite sure that our wages here will be higher.

The duty on articles as per tariff Item 83 was formerly 11 per cent., but early in 1922 it was advanced to 15 per cent. This was already rather a handicap for us, especially in our sales in Bengal, as first of all in that area we had to face the competition of the Indian Cable Co. On the 1st of March of this year the duty on this item was advanced again up to 20 per cent. and this makes the situation very difficult for us. If that duty would be advanced again, we think it will be quite prohibitive, unless the Indian Cable factory would sell with such a large profit, that we would still be able to do business at the same price, but such a policy is hardly possible.

The cables classified under 99-B pay a duty of 5 per cent. Previously there was no duty at all on these cables and the duty of 5 per cent. is only

from the 1st of January 1930. On these larger sizes the price of the raw materials is a still greater part of the total price and therefore a duty of 5 per cent. on these products is already very high.

Our various Indian representatives and of course first of all our Calcutta agents complained bitterly on various occasions that it was so difficult to do business on account of the competition of the Indian Cable Co. In this connection we might state that we are represented

in *Calcutta* by—

Messrs. Electric Trading Co., 54, Ezra Street,

in *Bombay* by—

Messrs. K. L. Mehta & Co., 35, Bangwadi Kalvadevi Road,

in *Rangoon* by—

Messrs. J. N. Batliwala & Co., P. O. Box 890.

in *Madras* by—

Messrs. C. Sabapathy & Co., 159, 160, Moor Street.

We know that our Bombay representatives, Messrs. Mehta, sent already the necessary information about this question to the Tariff Board through their association.

If it should be allowed to us to draw any conclusion, we should say with reference to the points indicated above that from an international point of view it would only be fair that products of one factory imported in another country should not have to pay more duty than the products of a factory situated in that other country should have to pay if imported in the country of the first indicated supplier or in other words: the duty on rubber insulated wires and cables classified under Item 83 should be 8 per cent. and those classified under 99-B should pay 5 per cent.

If the duty should remain at the actual level being 20 per cent. and 5 per cent. respectively, it is already very difficult to go on with the exportation of our products in India, but should these duties be advanced again, we think the new tariff will be absolutely prohibitive for us. We therefore do hope that the application from the Indian Cable Co. for a further increase in duty will not be granted.

### **The British Electrical and Allied Manufacturers' Association.**

*Letter dated 14th July, 1931.*

1. I am directed by my Committee to advise you that the official notices regarding the above appearing in the Indian Trade Journals of May 21st and May 28th were considered by my Committee at a Meeting held on June 30th.

2. I should inform you that my Committee consists principally of Representatives in India of the leading British Machinery Manufacturers and several of these have an interest in the importations of electric wires and cables in Companies who are Members of the British Cable Makers Association.

3. The Members of my Committee are therefore very keenly interested in the electrical development of India and it was largely due to their representations that the duty on "machinery" as defined in the Tariff Schedule was reduced to 2½ per cent. with effect from the 1st March 1923 and the matter is referred to at the foot of page 43 of the Report of your Board on the question of Tariff Equality published in 1928; this duty of 2½ per cent. was subsequently reduced to *nil* by Government with effect from 1st October 1927 to assist the Cotton Textile Industry.



4. My Committee see from the notifications referred to above that a application for protection to the manufacture of electric wires and cable other than paper insulated cables has been made by the Indian Cable Co and I am instructed to enter their emphatic protest against such a course. My Committee not only wish to protest against any increase of duty but to press for a removal of the present duty of 20 per cent. on electric wire and cables of one-eightieth part of a square inch and smaller.

5. My Committee wish to point out that the electrical development of India is a matter of far reaching consequences and the development in India will be rapid within the next few years when the three large Government Distribution Schemes in the Punjab, the United Provinces and the Madras Presidency start to function and for all these schemes members of my Committee have supplied large quantities of machinery. The United Provinces Scheme is the most forward and has already brought to many small villages the advantages of electric power for lighting purposes. This should bring with it prosperity and contentment for the masses but not if by a tariff wall the very material which is required by this class of consumer for wiring his premises is made prohibitive in price. It does not appear to my Committee to be consistent that while machinery and power cables to assist the electrical development of the country should be assessed duty free, the wire which the consumer requires in order to obtain the benefit of cheap power should be assessed at 20 per cent. duty.

6. Members of my Committee interested in the importations of "C. M. A." cable, the accepted "hall-mark" of quality throughout the world, have raised a query regarding the quality of certain wires and cables now being imported and presumably competing with the Indian Cable Co. and it is known to my Committee that no check whatsoever is made in India regarding the quality of importations. My Committee as a whole do not feel that they are competent to make suggestions as to whether the enquiry to be held by your Board should include for an investigation into the quality of imported wires and cables but they understand that "C. M. A." importing Companies are taking this point up with you separately; it is a matter my Committee feel of expert knowledge.

7. I am instructed to say in conclusion that my Committee feel it is not a question of protection but a case of removal of all existing duties on electric wires and cables to assist the electrical development of the country. to be followed by a removal of duties on all house wiring accessories and lamps for the same end, although it is realised that these latter are outside the terms of reference of your present enquiry.

### **Electrical Contractors' Association, Bombay.**

(1) *Letter dated 16th July, 1931, from Electrical Contractors' Association, Bombay.*

On behalf of the Electrical Contractors' Association, I have the honour to submit to you the views of my Association in the matter of protection applied for by the Indian Cable Co., Ltd.

No doubt, it is in the interests of Indian Indigenous Industries that protection be given in deserving cases, but it does not follow that a Company, which has only an appearance of an Indian concern with only one Indian Director on its Board, should be given protection. The Agents' Company of the Indian Cable Co., Ltd., being a member of the British Cable Makers' Association Combine, is interested in the import of British Manufactured Cables, and it is, therefore, difficult to reconcile its position as importers with its present application for protection.

I shall now, in order of your queries, put forth the views of my Association as under so far as they affect the members and their clients only:

I. (i) (a), (b), (c) The industry has no advantage of an abundant supply of raw materials such as rubber and copper at present from India. It has on the other hand facilities for cheap power and sufficient labour. Regarding having a large home market, the geographical situation of the Company is such that extra expenses involved in freight and transit would be prohibitive to the Company to compete advantageously even if protection be given.

(ii) It is questionable whether the present Company will work the Ghatsila Mines profitably. It will be better for the Indian Cable Co., Ltd. to submit statistical reports of the Ghatsila Mines and state on what grounds it has based its expectations.

II. (a), (b), (c) From the Sea Borne Trade Report, my Association gathers that the total yearly import of wires and cables in India is to the value of about Rupees One Crore, as against about Rupees Four Lacs of the Company's annual production. If the Company be given protection as suggested by it, the taxation proposed will be considerably in excess of the actual annual output of the Company.

III. Generally speaking, any additional taxation levied on wires and cables will affect all Supply Companies, which, ultimately, will involve the consumer who has to bear the brunt, not only of the Supply Companies' enhanced charges, but also of the increased capital cost of his installation. In return, the only advantage India will get, will be, that a few hundred labourers will obtain a living, which, my Association considers, is nothing in comparison to the drain on the public by such taxation.

VIII. My Association requests you to supply a copy of the Application of the Indian Cable Co., Ltd. so as to reply to this query. My Association, however, is of opinion that the onus is on the Company to prove its claim.

IX. Unfortunately, the products of this Company are not known on this side of India, and therefore, my Association regrets, it cannot furnish any information about the quality of the wires and cables, though it is known that the prices obtained by the Company are in line with the British Cable Makers' Association Combine prices.

X. The geographical situation of the Company is such that the Company can only compete somewhere near its works. It will not be out of place to suggest here that in order to ease the difficulties of the Company, the Railway Board may assist the Company by allowing it preferential freight rates.

XI. My Association is of opinion that the general Indian demand is likely to increase, as the development of electricity is still in its initial stage.

My Association therefore submits that any protective duty on imported cables and wires will be a tremendous burden on the consumer and arrest the progress of all electrical developments in India.

If desired by the Board, my Association will be prepared to send its representatives to state its views before the Board, and elucidate on points stated in the text of this letter.

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(2) *Letter dated 28th August, 1931, from Electrical Contractors' Association, Bombay.*

In continuation of my letter to you of the 16th ultimo, I have the honour to add here a few more facts that I have gathered from the two Circular Letters received from the Indian Cable Co., Ltd. giving a short history of the Company together with certain statistics relating to expenditure, etc., copies of which are sent herewith for your information.

Referring to their first circular letter, clause 4, paragraph 2, I have to state that the contention raised by the Indian Cable Co., Ltd., does not

hold water for the plea for protection. It could be read between the lines that the requisition for tariff protection is more for the protection of the C. M. A. Combine, than for the Indian Cable Co., Ltd. themselves. I understand that large importers of cables other than C. M. A. Combine have obtained certificates from the test house at Calcutta, and such importers have been patronised by the Indian Stores Department, Railways and consuming public. Therefore, there could be no question of inferiority of foreign cables, other than C. M. A. Combine.

Referring to their remarks about "Wire-drawing in India" paragraph 4, I have to state that at present, the Indian Cable Co., Ltd. are drawing wires from imported copper bars. Therefore, it would be a waste of public money to give protection, and increase the price of bare copper conductors. If the Company can obtain copper from Indian mines, wires drawn from such copper would not advantageously compete with importers'.

Enclosure No. 1.

CIRCULAR No. 1.

(Copy.)

2, Waterloo Street, Calcutta,

8th July, 1931.

From

The Indian Cable Co., Ltd.,  
M. A. British Insulated Cables Ltd.,

To

The Hon'ble Secretary,  
Electrical Contractors' Association,  
Akbar Building, 203, Hornby Road, Bombay.

*Application for Protective Duty on Electric Wires & Cables.*

Dear Sir,

A general feeling appears to be current that this Company is endeavouring by means of an enhanced import tariff to place an increased burden on the user of electric cables and wires. It will, we are sure, assist every one interested in this subject if we briefly explain the situation.

(1) This Company was floated in 1920; commenced manufacture early in 1923; and sold the first large cables produced to the Tata Iron and Steel Co., Ltd. in July 1923, to the value of Rs. 32,000. (These Cables have been in continuous service since that date.)

(2) After eight years trading the shareholders have had no return on their investment on either the preference or ordinary shares.

(3) An enhancement of the Import Duty on high grade rubber insulated cables is not desired. It is suggested that inferior and therefore low priced cables should pay the same amount of import duty as the high grade and therefore more costly cables.

(4) Protection is essential on uninsulated conductors and other conductors which might compete with these, such as weatherproof aerial conductors, over  $\frac{1}{8}$ th sq. inch.

As it is not our intention that the price of rubber insulated cables in general should be increased there is no need to go into this matter in detail. In passing we would mention that the low priced cable being imported into India, (labelled as being "equal" to another cable with which comparison is impossible on account of the vast difference in quality) is a

very unfair form of competition apart from the fact that the use of this cable is dangerous to life and property. We have requested that cable that will not pass certain tests should not be admitted into a country like India where the average user knows nothing of respective qualities and is likely to be attracted by a low price to his own detriment. Failing this, we suggest that low grade cable should pay the same amount of duty as good cable, *i.e.*, the duty should be a specific one of so much per coil irrespective of quality.

We trust that any inference that "Indian Cables" are not what they are claimed to be—The best obtainable in India—will be ignored. Naturally importers will oppose any tariff change that is opposed to their interests and this we expect. In doing this it is unfortunate that references have been made to the respective quality of certain high grade cables and Indian Cables to the detriment of the latter. We wish to assure all potential users of cable that there is no ground for the suggestion that we have encountered difficulties in manufacturing vulcanized India-rubber in the tropics which will render it impossible to produce goods of the highest quality. We find in fact that the durability of Indian Cables exceeds that of imported cables, or in other words the rate of deterioration is much slower in consequence of the rubber having been manufactured in the temperature in which it is afterwards employed.

As regards uninsulated conductors an import duty is essential to the continuance of wire drawing in India. Manufacturers in more developed countries, usually with a very remunerative home-market are apparently prepared to ship wire to this country at any figure which will take the business from the local factory.

The Tariff Board will go into the details later so that there is no need to quote figures to support our statements herein.

Any duty on uninsulated conductors will have an infinitesimal effect on the cost of electricity and as the duty if applied will only be in force for a limited period, it is necessary to consider whether the advantage of a local industry in intensifying competition and giving quick delivery compensates for the temporary penalty applied to secure its continuance.

In conclusion we would state that our interests are as closely connected with electrical development as those of Electric Supply Companies; Electrical Contractors; and possibly more so than those of importers, and that we would not suggest the further enhancement of certain import duties if we were not convinced that ultimately this industry will be instrumental in furthering the development which will mean a greater demand for all electrical goods including those produced at Tatanagar.

We have embodied in the enclosure attached extracts from some of the more interesting replies to the Tariff Board questionnaire as these will give an idea of our activities.

Yours faithfully,

The Indian Cable Co., Ltd.

(Sd.)

Chairman.

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*Extracts from information given to the Tariff Board in reply to their Questionnaire.*

1. We have trained all our labour 56 per cent. of which is skilled.
2. All departments are in charge of Indians. Originally there were 5 Europeans including cable making and wire-drawing experts.

3. Apprentices are trained in Tatanagar and one is now in entire charge of contracts for 11,000 and 37,500 volts transmission lines.

4. The number of employees engaged in the factory is approximately 500.

5. Reply to question II attached will indicate what we have done to house our labour and promote its welfare.

6. The Company does not ask that import duty on high grade cables either less than th sq. inch or not less than sq. inch should be altered in any way. It is requested that inferior cables, imported at a low valuation should pay the same amount of duty per coil, i.e., a specific duty of so much per coil of a given size irrespective of quality or cost.

7. A 20 per cent. import duty on Uninsulated Conductors would on present prices based on a Town Supply Scheme with a Block Value of say Rs. 18 lakhs, involve an increase in Capital Expenditure of .951 per cent. and an increase in the price to be charged for current (if revenue is to earn 15 per cent. on the increased capital) of .0112 anna per unit.

#### QUESTION II.

*What arrangements, if any, have you made for housing your labour and promoting its welfare in other directions?*

The accommodation provided for Indian employees is of 6 types as follows:—

*A Type.*—8 quarters for subordinate supervising staff living with families.

*N & Type.*—24 Quarters for men of charge hand clerical standard who are living with their families.

*B Type.*—10 Family Type Quarters but 2 are occupied by bachelors.

*RN Type.*—16 Quarters all occupied by families.

*New C Type.*—40 Quarters all occupied by bachelors.

*Old C Type.*—20 Quarters all occupied by bachelors.

A total 118 quarters housing 210 employees. No rental charges are made for these quarters. The Company provided accommodation for skilled workers only, the aboriginal class preferring to live in their own bustee in adjacent villages. Of our 239 skilled employees, 210 or 87.9 per cent. are accommodated in rent free quarters, the remaining 29 or 12.1 per cent. providing their own accommodation. The entire unskilled staff provide accommodation for themselves.

With the hope of maintaining an improved sense of understanding between the management and labour a Works Committee was established in January 1929 and has met monthly since that date. The Committee consists of 10 workpeople elected by vote from 10 sections and two representatives of the management. The object of the Committee is to discuss all problems for the welfare of the Company and the employees.

To control the recreation interests of the employees the Cable Co. Welfare Association has been formed and consists of 3 sectional committees controlled by one Central Committee.

The sub-heads are:—

Literary.

Dramatic.

Sports.

The Company has designed and built at their own cost a club-room in the centre of the quarters. The building consists of a stage for the

presentation of plays, with two separate rooms for use as a library and a sports room.

A library which is well stocked with books and magazines in several languages is organized by the literary section.

The dramatic section is responsible for the organization of English and Bengali plays.

The sports section arranges the annual two-day sports of field, track and humorous events held in January of each year. Football, cricket and badminton games are organized and local competitions entered.

Enclosure No. 2.

CIRCULAR No. 2.

At the requests of users of cables interested in this industry we have prepared an appended history of this Company with statistics which will indicate its value to the Country as buyer.

The Indian Enfield Cable Co., Ltd. was floated in 1920 by Kilburn & Co. with a capital of Rs. 15,00,000. The entire capital is offered to the public for subscription. Unfortunately due either to the whole of the shares having been unplaced or forfeited for failure to meet calls the ordinary capital amounted to Rs. 10,72,050.

In 1922 almost the whole of the money subscribed had been expended on plant and buildings and funds were not available to complete the factory and bring it to a producing stage. In all probability the Company would at this time have gone into liquidation resulting in the loss of at least 95 per cent. of the money invested. British Insulated Cables Ltd. become interested and decided, if given the management, to subscribe (for preference shares to be issued) sufficient money to complete the works. In October 1922, British Insulated Cables Ltd. took over the Managing Agency and took up preference shares as money was required to meet the cost of either additional plant or installation expenses. In 1923, manufacture commenced and the Managing Agents, to assist the Company, accepted for the first five years half the monthly allowance to which they were entitled and in addition (to avoid raising further capital) gave the Company very long credit on Raw Materials shipped to India (at current market rates) free of interest for one year and also three months credit free of interest for four years. The Managing Agents have already given the Company their unstinted technical assistance and at the inception loaned the Works Manager of their British Factory for some months to ensure that production was commenced on right lines.

Owing to the removal of import duties, alteration of rate of exchange from 1s. 4d. to 1s. 6d. per rupee and undercutting by competitors combined with the fact that the Company from 1923 to 1929 paid higher rates of duty on the raw materials than its competitors paid on the finished article, the business became entirely unremunerative.

In 1929, Government imposed a duty of 5 per cent. on Rubber Insulated Cables over  $\frac{1}{16}$ th sq. inch in cross sectional area to compensate for the Tariff inequality until then existent. This change in the import duty together with the fact that about the same time the importers of high grade cables increased the price of their cables made the Company's business in high grade cables, if not very profitable at least possible.

The Company's difficulty still exist in a more intense form than ever, in regard to Rubber Insulated Cables of non-descript type and uninsulated conductors which are admitted duty free and it is in these directions that Government assistance has been sought.

It is said that figures speak and those given below may be of interest:—

- (1) Although Indian Shareholders have tired of waiting for a return on their money and many have sold their holding, the ordinary shares are still largely in the hands of Indians.

(2) We have 280 skilled operators trained entirely in our factory.

(3) We paid in wages in—

1928-29—Rs. 1,67,000.

1929-30—Rs. 1,45,000.

1930-31—Rs. 1,41,000.

We paid for Fuel & Electrical Power—

1928-29—Rs. 44,454.

1929-30—Rs. 42,390.

1930-31—Rs. 35,401.

We paid in Railway Freight & Carriage—

1928-29—Rs. 79,600.

1929-30—Rs. 71,600.

1930-31—Rs. 71,675.

Indigenous articles were purchased (apart from coal) to the following values:—

1928-29—Rs. 2,69,000.

1929-30—Rs. 2,84,000.

1930-31—Rs. 2,30,000.

What does an importer spend in this country under the same heads? Possibly not 5 per cent. of the figures given.

This is a pioneer industry and as such is of the greatest value to India. It requires considerable courage and confidence to be first in the field as considerable experience has to be bought—very dearly sometimes. We have acquired the necessary experience in manufacture to enable us to produce goods which will bear comparison with anything as yet imported or likely to be; the experience however, which is the most trying of all is to find that either Indians will not buy the goods because they are locally made (which is taken to mean that they are inferior) or will not support the industry because it is not "National" by which is meant that it is not entirely Indian finance. Obviously in an industry of this type outside skill and experience is essential. The fact that Indian Cable Co., Ltd. is backed by British Insulated Cables Ltd., the largest firm in the cable business in Britain, has been of inestimable value to the Local Company in inspiring confidence in its products and if some of the Indian Shareholders have lost confidence, there are others who continue in hope that when teething troubles are over, the venture will be successful and give a reasonable return to its shareholders.

#### Share Capital.

	Ordinary.	
	Indian.	Non-Indian.
1920-21 . . . . .	89,228	56,007
1922-23 . . . . .	78,148	57,707*
1923-24 . . . . .	...	...
1925-26 . . . . .	...	...
1926-27 . . . . .	63,815	72,415
1927-28 . . . . .	60,615	74,615
1928-29 . . . . .	59,865	73,365
1929-30 . . . . .	56,560	78,670
1930-31 . . . . .	56,160	79,070

\* Shares forfeited at Directors' Meeting of 11th June, 1923—

Indian.	Non-Indian.
7,380	2,000

(3) Letter dated 29th September, 1931, from the Electrical Contractors' Association, Bombay.

I beg to send you herewith copies of correspondence exchanged between my Association and the Indian Cable Co., Ltd., Calcutta, which please take into consideration while arriving at the decision of giving the protection to the Company as asked for.

Enclosure.

(Copy.)

ELECTRICAL CONTRACTORS' ASSOCIATION.

Akbar Building, 203, Hornby Road,  
Fort, Bombay, the 25th August 1931.

To

The Managing Agents,  
The Indian Cable Co., Ltd.,  
2, Waterloo Street, Calcutta.

Re PROTECTION ON WIRES & CABLES.

Dear Sirs,

I have gone through your 2 Circular letters, dated 8th and 21st July, 1931 respectively, and find that they contain much useful information about your Company and its activities and make interesting reading. As I am now desirous of knowing something more about your Company, will you please enlighten me on the following points?—

- (1) In your circular letter, dated 21st July, you state on page 276 "In 1929 Government imposed a duty of 5 per cent. on Rubber Insulated Cables over  $\frac{1}{80}$ th sq. inch in cross sectional area to compensate for the Tariff Inequality until then existent. This change in import duty together with the fact that about the same time the importers of high grade cables increased the price of their cables, made the Company's business in high grade cables if not very profitable at least possible." May I know what financial benefit was obtained proportionately to the revenue by Government?
- (2) In 1930-31, the wages paid to your staff, both European and Indian, amounted to Rs. 1,41,000. Can you give me separate figures for both of them? Will you also let me know the number of the Indian employees drawing a salary of Rs. 500 and upwards per mensem?
- (3) May I know the total value of the output of your Company so far as the Rubber Insulated Wire is concerned?

Hoping to be excused for the trouble you are put to and thanking you in anticipation.

I am, Yours faithfully,

For Electrical Contractors' Association,  
(Sd) E. H. ASAVAD,  
Honorary Secretary.



(Copy.)

THE INDIAN CABLE Co., Ltd.,  
M. A. British Insulated Cables Ltd.,  
Electrical Engineers & Cables Makers.

Head Office:

2, Waterloo Street, Calcutta.

Your Ref.

Our Ref. L. E. 1/32331/C.

Works: Tatanagar, B. N. Rly.

Post Box 514.

Calcutta, the 15th September 1931.

To

The Hon'ble Secretary,  
Electrical Contractors' Association.  
Akbar Building, Hornby Road, Bombay.

Re PROTECTION ON WIRES & CABLES.

Dear Sir,

We have not previously acknowledged receipt of your letter of the 25th ultimo, because this was forwarded to the writer whilst he was in Bombay. An effort was made to see either the Chairman, Vice-Chairman or Honorary Secretary of your Association, without success; we are therefore compelled to try and reply to your questions although one is unintelligible and another unreasonable.

In regard to 1:—Government benefited to the extent of 5 per cent. duty on all cables imported over  $\frac{1}{80}$ th sq. inch in cross sectional area. We benefited to the extent of an extra 5 per cent. in price on all cables we made over  $\frac{1}{80}$ th sq. inch. We cannot reply to your question with figures because we cannot ascertain the value of cables imported over  $\frac{1}{80}$ th sq. inch in area.

In reply to question 2 our circular states clearly that the amount paid was in respect of *wages*. European members of the staff and highly paid Indians receive monthly salaries and these are not included in the figure given. The Company employ Indians in respectable positions in all sections of its business. As to the number in receipt of a salary of Rs. 500 or over we are not prepared to enlighten you. You might as easily have suggested Rs. 1,000 or over.

3. We will answer this question by enquiring if the members of your Association would inform us of the amount of business they are doing?

These questions and the way in which they are put do not leave the impression that you are sympathetically inclined towards local manufacture—possibly some of your members are interested in a competitors goods, if so this explains question three.

We hope we have drawn a wrong conclusion for we anticipated assistance from organisations such as yours in furthering the sale of the Indian made article.

Your faithfully,  
The Indian Cable Co., Ltd.  
(Sd) F. W. LEAKE,  
Chairman.

Akbar Building, 203, Hornby Road,  
29th September 1931.

To

The Managing Agents,  
The Indian Cable Co., Ltd.,  
2, Waterloo Street, Calcutta.

*Re* PROTECTION ON WIRES & CABLES.

Dear Sirs,

I have to acknowledge receipt of your letter No. L. E. 1/32331/C, dated the 15th instant. It was really disappointing that your Mr. Leake's effort to see the Chairman, Vice-Chairman or Honorary Secretary was without success. Your Mr. Leake stayed in Bombay for about 3 days and he could have seen any one of the office-bearers by appointment through our Assistant Secretary. A frank discussion of the different aspects of the questions would have been conducive of very beneficial results to both the sides.

*Re Question 1.*—My Committee wanted to know the extent to which your Company benefited, not by increased prices but by increased production. The object of any protection granted to an indigenous industry can be said to have been served when the industry while securing higher prices due to enhanced duty can displace foreign manufactures by a gradually increasing output. Otherwise, the protection becomes a burden to the consumer.

*Re Question 2.*—While my Committee has correctly understood your circular I have to add that administration charges form no small percentage in an industrial organisation and it is but natural for my Committee to know to what extent indigenous talent had been utilized in the administration of a protected industry.

*Re The Limit of Rs. 500 or over.*—My Committee feel sure that in the future order of things in this country, no responsible body or association can overlook this point when a case is being made out for the protection of an industry that is to be called indigenous or national.

*Re Question 3.*—My Committee believe that they are quite justified in inquiring about the total annual output of your Works in quantity as well as in money value, in order to have an idea of the capacity of your Works, and thus to see whether we on our side can with advantage utilize your Company's products.

My Committee regret that the questions asked have created a wrong impression of our being unsympathetically inclined towards your Company's manufactures. Frank and detailed replies to our queries would surely have won the sympathy of any of the hesitating members of my Committee even.

Let me assure you that my Association as a body has full sympathy for a national and indigenous industry, and I am sure that many of the members will come forward to help it by buying its products. If there are more circulars like your recent one on armature wires, please send these out to the local trade.

My Committee hope that you will reconsider your attitude taken up in your above letter and send detailed replies to our questions.

Yours faithfully,  
For Electrical Contractors' Association,  
(Sd) B. R. HARI,  
Honorary Secretary.

**Calcutta Import Trade Association, Calcutta.**

*Letter No. 166-M., dated the 21st July, 1931.*

**PROTECTION TO THE MANUFACTURE OF ELECTRIC WIRES AND CABLES.**

I have the honour to refer to Tariff Resolution No. 707-T. (I) issued by the Government of India in the Department of Commerce. It appears from this notification that Government has referred to the Tariff Board an application for protection to the manufacture of electric wires and cables, other than paper-insulated cables, which was received from the Indian Cable Co., Ltd., Calcutta. Interested parties are requested to make their views known to you.

2. There is no doubt in the minds of the Committee that the Industry does not satisfy the requirements set forth by the Fiscal Commission as necessary precedents to the grant of protection; and there is no doubt that the industry should not be protected. The industry already possesses facilities which place it in an advantageous position; there is an already large and growing market at its door; the machinery used in the process of manufacture is automatic enabling cheap labour to be employed; there is at present an import duty on some wires and cables; and the industry obtains its raw material free of duty.

3. The Committee submit that it is common knowledge that the competition among "C. M. A." importing manufacturers is that of quality and service and that no ruinous price competition is indulged in. The advantages of a stable price are great to the consumer. It is beyond the power of an ordinary buyer to determine the quality of a rubber cable by inspection, so that without stabilised prices there would be a great temptation in commercial competition to lower the price at the expense of the quality. It must not be thought, however, that these stabilised prices bear heavily upon the consumer; for it has been demonstrated that the British Cable Makers Association has never acted in an unreasonable manner towards the public. The Committee are able to say that importers of a high grade quality cable are able to make a reasonable margin of profit on prices which are just a few per cent. higher than those of the Indian Cable Co., Ltd. It is not possible, therefore, to comprehend on what grounds the industry has made a plea for protection for, with its advantages, as compared with the importer, it would seem that the industry is also able to obtain a fair margin of profit. And the results of the Company demonstrate this.

4. If the Tariff Board proceeded to examine the relative costs of production in India and abroad they would find, the Committee are sure, a difference in favour of the Indian Company. So their ground for protection must not be that the price of the imported article is such as to preclude their entrance into the market; and this statement is supported by the fact previously expressed that the prices of the Indian industry are a few points below that of the foreign industry. It must be, then, that they feel that their market is restricted and that with the aid of a protective duty they could develop at a quicker pace and capture the bulk of the trade in India. But this the Committee contend is not a justifiable basis for protection and the initial mistake of the industrialist in choosing an unsuitable site should not be perpetuated at the cost of the community. That the United Provinces for example, should be called upon to pay for the mistake of the industrialist in Bengal is not justice to the consumer.

5. The Indian Cable Co., the Committee understand, is controlled by the British Insulated Cables, Ltd., and very little of the huge capital placed in the Company is owned by Indians. Certainly the Indian shareholders are in the minority in a Company which is virtually owned and controlled by European interests. It does seem a paradox that the Tariff Board should be examining the case of such a Company for protection which

would be achieved at the expense of the Indian tax-payer, and this is one more point against a recommendation for protection going forward to Government. It is the accepted policy of Government that the aim of protection is to foster an Indian industrialism and not an industrialism in India carried on and controlled by non-Indians. And the Committee appreciate the logic of such a policy.

6. The Committee have had an opportunity of perusing a letter, dated 24th June, 1931, addressed to you by W. T. Henley's Telegraph Works Co., Ltd., and they cordially support the arguments advanced in it against protection. It will be remembered that in 1928 the Board conducted an enquiry into the question of Tariff equality in respect of the manufacture of electric wires and cables. The oral evidence tendered then by the representative of the Indian Cable Co. makes interesting reading and the Committee would ask you, if you have not already done so, to read through the evidence tendered. It is there contended that what was responsible for the insufficiency of orders was the prejudice against the Indian Cable which exists in the minds of the consumers. Messrs. Henley's letter fully explains this point and it seems reasonable to state that it is not protection to the industry that is wanted but protection to the consumer; and how better could this be done than by the institution of a testing department?

7. Another point which must loom large in the Board's calculations is whether it would be advisable to impose burdens upon the Government: upon industrialists; (for power costs must rise); upon the promoters of hydro-electric schemes; and upon small consumers, at a time when prices are falling and retrenchment orders are common. The Committee are sure that the Board's answer to this will be in the negative. They would respectfully urge upon the Board the necessity of no further additional burdens being imposed upon industry and they trust that the Board's recommendation will be that no case has been made for the grant of protection to the Indian Cable Co.

### **The India Committee of the Cable Makers' Association.**

*Letter dated 18th August, 1931.*

With reference to the above matter, we, the undersigned members of the India Committee of the Cable Makers' Association, submit herewith our representations thereon, in pursuance of communications which have already passed between you and some of the signatories hereto on the subject.

As a preface to our remarks we desire to make it clear that our representations deal exclusively with the situation in regard to Rubber Covered Wires and Cables only.

The Cable Makers' Association, hereinafter referred to as the "C. M. A.", is an organisation which was established in 1899 by all the principal companies then engaged in the Electric Cable Industry in Great Britain, to determine and maintain the quality of rubber insulated cables, which objects have been fully achieved to the benefit of the consumer by reason of continuous research work. It has never been the policy of the "C. M. A." to manufacture down to a price, which could, in fact, only be done at the sacrifice of quality.

We would here stress the point that, as the Indian Cable Co., Ltd. are similarly manufacturing cables of quality, their apparent need is for protection against the importation of cable of inferior quality which naturally is a serious competitor on price because of its inferior quality.

Our views generally on the subject may be summarised as follows:—

- (1) We object to any increase in existing customs duty on high-grade rubber insulated Wires and Cables.

- (2) We recommend the imposition of a specific duty on low-grade rubber insulated Wires and Cables.
- (3) We recommend that definite standards of qualities be laid down.
- (4) We recommend that provision, statutory, if necessary, against the use of low-grade rubber insulated Wires and Cables be enacted in the interests of the general public.

In amplification of the above views, we have to observe as follows:—

With regard to (1).—Assuming for the purpose of argument that the principle of an increase in present Duties was agreed to, we cannot conceive that any such increase as is contemplated could be sufficient to bridge the great gulf between the market prices of cables manufactured by the Indian Cable Co., Ltd. and those of the low-grade cables now imported into this country, against which our objection is principally directed. We base this view on the fact that the market prices of the low-grade cable imports referred to are approximately 50 per cent. below those of the cables manufactured by the Indian Cable Co., Ltd.

On the other hand any increase in present duties would lay an additional heavy burden on high-grade Wires and Cables, a burden which, we would point out, would have to be entirely borne by the consumer in view of the fact that we cannot reduce our prices without sacrificing our standards of quality. At the same time, any additional duty imposed would have the effect of making the difference in *value* between high- and low-grade cables even greater than it is at present, and accordingly would operate as a direct incentive to consumers to purchase low-grade Wires and Cables merely by reason of their cheapness, without regard to quality.

Any increase in the duties on "C. M. A." quality products must, in consequence of its effect in increasing the cost of electrical installations, inevitably constitute a deterrent on electrical development among all potential users of electrical energy in India. This question is of vital importance, particularly in view of the rapid development of Government Hydro-Electrical Projects in various Provinces for the purpose of providing ample supplies of electrical energy to thousands of small towns and villages. In addition, new Electric Supply Companies are being promoted and established throughout the country for this purpose, while, at the same time, existing concerns are paying closest attention to the cultivation of the small consumer.

It is our firm conviction that the salvation of the local industry which the Indian Cable Co., Ltd. are fostering, lies wholly in their ability to maintain a high standard of quality.

With regard to (2).—While we agree that a Specific Duty would be sound in principle, we fail to see how one could be devised which would adequately meet the case.

With a ratio of approximately 50 to 100 in the selling prices of low-grade and "C. M. A." qualities respectively, it is manifest that a specific duty, to be fully effective, would have to be about 100 per cent. on low-grade cables *only*, if such cables are to be brought into line in price with "C. M. A." cables, a course which is obviously impracticable.

If the value of Customs Duty now paid on each coil of "C. M. A." cable were taken as the basis for a specific duty and if such duty were levied on cheap low-grade cables, the effect thereof in increasing the cost in India of the latter would be almost negligible (a probable maximum of 10 per cent. only), and wholly inadequate to meet the situation forming the main foundation of our representations herein. At the same time we consider that any extension of the theory of levying a specific duty would still leave the existing great disparity in prices only very slightly reduced.

It is felt therefore that the possibilities in a specific duty are not such as to afford more than a mild amelioration of the existing position.

With regard to (3).—To deal with the problem of low-grade Wires and Cables involves control and test at the Port of Entry.

Such control is now in force in Australia where the import of rubber covered wires and cables below a certain standard of quality, is prohibited.

In India it would involve the setting up of an organisation for the testing of all imports which do not bear adequate indication of a certain guaranteed quality. That quality might be the standard laid down in B. E. S. A. Specification No. 7, 1926, Table 12, as regards Thickness of Dielectric and Straining Tests and in the "Regulations for the Electrical Equipment of Buildings" Table IX for Insulation Resistance, as issued by the Institution of Electrical Engineers. Any imports found on test to be below that standard should be refused admission to the country and would remain in the custody of the Customs Authorities until re-exported.

The cost of providing facilities for the testing of the quality of cables at Ports of Entry, as referred to above, could be met by setting aside a percentage of the existing Customs Duty. This, in our view, would not result in a loss of revenue, but, on the contrary, would probably result in an increase therein by reason of the elimination of low-grade cables.

With regard to (4):—The use of low-grade rubber insulated wires and cables, particularly the smaller sizes which are applied almost exclusively to house-wiring purposes, constitutes a real danger to life and property, which danger is accentuated by the rapid extension of alternating current for electric supply systems.

In this connection we would point out that a considerable proportion of the low-grade cables referred to emanates from the Continent, where 110/115 volts only is the common standard on electric supply systems, whereas the standard voltages in Great Britain and India are 220 volts for Direct Current and 230 volts for Alternating Current.

The ordinary layman, in having his house wired for lights and fans, is entirely at the mercy of the wiring contractor as regards the quality of the insulated wire used. The average consumer is not able to judge, by appearance, the difference between good and bad cables, price being the dominating consideration. We have to suggest, therefore, that while the Indian Cable Co.'s demand for protection is on the basis of price competition, the real crux of the situation relates to the quality of imports, a matter on which the consumer is also now due protection.

Unless it is agreed to prohibit their import at Port of Entry, it is apparent that, to control the use of low-grade and consequently dangerous wires and cables after importation into India, by restriction, legislative or otherwise, would involve a vast organisation, almost impossible to maintain under the conditions prevailing in this country.

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### Upper India Chamber of Commerce, Cawnpore.

*Letter dated 5th June, 1931.*

With reference to the Government of India, Department of Commerce, Resolution (Tariffs) No. 707-T. (1), dated the 11th May, 1931, in connection with the protection to the manufacture of electric wires and cables, other than paper insulated cables, my Committee have been favoured with a copy of a communication addressed to you by the Agents, Cawnpore Electric Supply Corporation Limited, Cawnpore, protesting against the protection asked for by the Indian Cable Company, Limited, Calcutta.

My Committee entirely agree with the views expressed by the Cawnpore Electric Supply Corporation, Limited, and they consider that any increase in the cost of electric cables would adversely affect the development of industries in India.

**Burma Chamber of Commerce, Rangoon.**

(1) *Letter No. P.-267/476, dated the 9th June, 1931.*

I am directed to refer to the Government of India, Commerce Department, Resolution (Tariffs), No. 707-T. (1), dated the 11th May, 1931, referring to the Tariff Board for enquiry and report, an application by the Indian Cable Company, Ltd., Calcutta, for protection to the manufacture of electric wires and cables, other than paper insulated cables.

2. The Chamber is not aware on what grounds the Indian Cable Co., Ltd., have applied for protection; and in this connection I am to invite your attention to the following condition laid down in paragraph 97 of the Report of the Indian Fiscal Commission with which the Tariff Board, in dealing with claims for protection, should satisfy itself:—“No industry which does not possess some comparative advantages will be able to compete with them (foreign goods) on equal terms, and, therefore, the natural advantages possessed by the Indian Industry should be analysed carefully, in order to ensure as far as possible that no industry is protected *which will become a permanent burden on the community.*”

3. It is also laid down in the conditions that the industry applying for protection must be one which will eventually be able to face *world competition without protection.*, i.e., the protection, if granted, must be a *temporary one*, and must be given to industries which will eventually be able to stand alone. The Tariff Board is best able to judge how far this has been the case in connection with various other industries who claimed protection. So far as this Chamber is aware, protection, once granted to these industries for a definite period, has only proved to be an incentive to make further attempts for securing a continuance of the protection after the expiry of the period of such protection.

4. There cannot be any objection to the fiscal policy of the Government of India being legitimately directed towards fostering the development of any industry in India; but I am to point out that, in accordance with the recommendation of the Indian Legislative Assembly on the 16th February, 1923, in the application of the principle of protection regard must be had to the financial needs of the country and to the well-being of the community. Protection for the manufacture of electric wires and cables will only tend to increase the cost of electric installations and Burma will have to pay an increased cost for the goods without deriving any corresponding benefit. The present depression resulting from the heavy fall in prices of paddy and other produce makes the present a particularly inopportune time for saddling the people of this Province with any additional burden, and actually calls for a reduction in the duty on these articles.

5. Under these circumstances, I am directed to protest in the strongest possible terms against protection in any form being granted to the manufacture of electric wires and cables.

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(2) *Letter No. P.-322/476, dated the 8th July, 1931, from the Burma Chamber of Commerce.*

In continuation of my letter No. P.-267/476, dated the 9th June, 1931, I am directed to address you again on the subject of the application by the Indian Cable Co., Ltd., Calcutta, for protection of the manufacture of electric wires and cables, other than paper insulated cables; and to urge very strongly that this application be rejected for the reasons adduced hereunder.

2. Since writing the above letter, my Committee have been furnished with certain particulars from which it is seen that the principal manufactures of the Indian Cable Co., Ltd., fall under three heads as regards assessment to duty of the imported articles with which they compete, and against which they are applying for protection:—

- (a) Rubber insulated electric wires and cables of less than 1/80th part of a square inch sectional area—assessed at 20 per cent. *ad valorem*.
- (b) Rubber insulated electric wires and cables of area 1/80th part of a square inch sectional area and larger—assessed at 5 per cent. *ad valorem*.
- (c) Bare copper wires of area 1/80th part of a square inch sectional area and larger—admitted free of duty.

3. The rubber insulated wires referred to in (a) are exclusively used for house wiring, and the Indian Cable Co., Ltd., are manufacturing cable to the standards of the British Cable Makers Association known universally under the registered trade mark of "C. M. A.". Although the laboratory tests of the cables manufactured by the Indian Cable Co., Ltd., and those of the "C. M. A." are reported to have given identical results, it is not conclusively shown that the cables of the Indian Cable Co., Ltd., are in every respect equal to the "C. M. A.".

4. In considering the following remarks it is necessary to bear in mind, and it is so important as to be the crux of the whole matter, the rubber insulated cable is unlike most other manufactured articles in that a low-grade and poor quality cable and a high-grade and good quality cable have the same appearance to the average consumer; and that it is possible to make a low-grade and poor quality cable down to almost any price. This is a peculiarity of most products containing rubber but while, to quote an example, as regards tyres, it is soon brought home to the consumer that a low-grade and poor quality tyre does not pay, with rubber cable it is impossible for a consumer to distinguish a lower-grade cable from a high-grade and good quality cable as he does not handle or buy the product but usually purchases through a wiring contractor who quotes a price per point installed. It is an unfortunate fact that a really low-grade and actually unsafe wire will, if installed during dry weather and in well varnished casing and capping, often give a sufficiently high test to enable the installation to be passed as suitable for connection by the Electric Supply Co. interested.

5. I am to emphasize that laboratory tests on cable have a distinct function but that *the* test and for which there is no laboratory substitute is the test of durability, *i.e.*, the test of time. Laboratory intensive tests give indications regarding durability but are not a test of durability, for which there is but one test, the test of time. The Indian Cable Co., commenced manufacture in 1923, and did not place much cable on the market until 1925, so that there cannot be any quantity of their cable in India which has been longer in use than 6 years which is not a sufficiently long period to constitute the test of time. Moreover, in the opinion of rubber cable experts, it is not possible to manufacture a cable equal in *durability* to "C. M. A." cable in a tropical climate.

6. At the present level of prices the importers of "C. M. A." grade cable obtain a reasonable margin of profit, after paying for ocean packing, harbour dues, freight, insurance, landing charges, import duty of 20 per cent. and interest charges on capital laid out in stock. Against these charges, the Indian Cable Co., import, free of duty, their principal raw materials such as copper, rubber and lead, which form a large percentage of the cost of the cable, varying with the size of the cable with a minimum of 60 per cent. for small sizes up to 80 per cent. for large sizes; and in addition they have a protective duty of 20 per cent. It appears from the published results of tenders that the Indian Cable Co.'s



prices are usually a few per cent. below "C. M. A." prices; and as stated above, when the importers of "C. M. A." cable, after meeting import charges and a duty of 20 per cent., obtain a reasonable profit, my Committee are convinced that the Indian Cable Co., should be able to make a reasonable margin of profit, and that no protection whatever appears to be necessary. My Committee therefore considers that the present protection given to them by the 20 per cent. duty on imported cable is quite unnecessary and should be abolished, and that it should be permitted to be imported free of duty in the same way as power cables. I am to point out that it is a grave inconsistency that while machinery and power cables to assist the electrical development of the country should be assessed duty free, the very type of wire which the consumer requires in order to wire his house and thus obtain the benefit of cheap power should be assessed at 20 per cent. duty.

7. The Indian Cable Co., as stated above, are trying to maintain a standard of good class cable for India in so far as this is indicated by laboratory tests, and therefore what they appear to require is not protection as regards *price* against their "C. M. A." importing competitors of high-grade wire, but protection as regards *quality* against the low-grade and unsafe cables of non-descript types now being so freely imported. I am to submit that the steady electrical development of the country should be on sound lines. The present large importations of low-grade wires for house wiring purposes constitute a menace, and in a market which is essentially one of price it is necessary to protect consumers against the temptation of low priced and unsafe wires and cables. With the steady growth of 220 volts alternating current 3-phase 4-wire Town Distributions, it is essential that good class of cable should be used for house-wiring; and it is well within the knowledge of Government Electrical Advisers and Electrical Engineers that much wiring now being imported is unsafe and its use should in the interests of consumers be prevented. It has been found to be necessary to protect consumers in Australia where the standard of education of the consumer is higher than in India. All importations of wires and cables in Australia are tested at a port of entry; and it is on these lines, I am to submit, that the Tariff Board should direct their enquiries as regards protection for the Indian Cable Co. The enquiry should include an investigation into the general position of the *quality* of imported wires and cables competing with the Indian Cable Co. If the duty is raised so will the tendency be for importers of low-grade cables to further lower the quality thus making the position of the consumers worse than at present. The importers of "C. M. A." quality wires and cables would increase their prices, and as it is to this quality that the Indian Cable Co., are endeavouring to manufacture, the difference in price between imported low-grade wires and cables and those manufactured by the Indian Cable Co., would still remain or possibly be enhanced.

8. With reference to the wires and cables referred to in (b) above, I have to state that most of these sizes are used for industrial purposes and not for house wiring; and at present the importers of low-grade cable do not do much business in these sizes owing to the large capital involved in carrying stocks and the limited demand. The principal importations are the "C. M. A." grades, and the importers are obtaining reasonably profitable prices for these. The Indian Cable Co. who usually appear to follow fairly closely the "C. M. A." importers' prices, must also obtain a reasonable margin of profit; and I am therefore to suggest that they do not need any measure of protection at all, and that these wires should, in the interests of consumers, be permitted to be imported free of duty in the same way as paper insulated power cables.

9. As regards Hard Drawn Bare Copper Wire referred to in (c), I am to submit that any protective duty imposed on this class of wire would place a burden on consumers and arrest the development of Electric Supply Companies throughout India. Most small Electric Supply Cos. in India carry out their distribution with overhead lines and the "mains" of such

a. Company usually require about half the capital cost. Of the "mains" portion, about one-half again is spent in bare copper conductors, so that one-fourth of the capital of a Supply Company is spent in bare copper mains. Any protective duty given to the Indian Cable Co., will result in the cost of the "mains" of a Supply Co. being increased to the extent of such protection.

10. A further point is that the actual wire drawing is a small matter and the number of men employed by the Indian Cable Co., on sizes now imported duty free cannot be other than a few dozen. All the black copper rod which the Indian Cable Co., use to make into wire is imported from America and represent 83 per cent. of the finished article. Although an import duty would certainly benefit the Indian Cable Co., I am to submit that it will place an unjustifiable burden on all consumers and arrest the development of cheap electric power for the masses. Moreover, the geographical position of the Indian Cable Co.'s factory is such that they cannot economically supply consumers in distant parts of India owing to freight charges.

11. The most important point to be considered is against the question of quality. The Indian Cable Co. draw wire to the accepted standard, *i.e.*, to the British Engineering Standard Association, Specification No. 125-1930, and they are called upon to compete with the non-descript imported article. The dangers of using unspecified bare copper wire are considerable and the fact that adequate testing apparatus is not easily available to the purchaser is taken advantage of by the unscrupulous importer. It is more expensive to draw copper wire to B. E. S. A. Standards than to no standards at all, and I am to mention one danger in particular that skin hard bare copper wire is brittle and breakage at a shakling point in a crowded bazaar street might lead to very serious consequences.

12. The Indian Cable Co. stamp the ends of their bare copper coils with the cords "Guaranteed to B. E. S. A. Standards"; and I am to suggest that all importers of bare copper wire should be required to do likewise, with heavy penalties if samples of consignments sent to the Government Test House at Alipore are found to be more than specified tolerances below standard. My Committee are of opinion that this measure would give adequate protection to the Indian Cable Co. and at the same time protect consumers in their own interests from purchasing non-descript wire for their transmission and distribution lines.

13. From the foregoing it will be seen that what the Indian Cable Co. require is not protection by an increase in the import duties, but protection against the importations of unsafe and poor-grade wires and cables. The rapid development of India in respect of electricity within the next few years will extend to small villages the advantage of cheap electric power for lighting purposes, thus bringing with it prosperity and contentment to the masses; but these benefits will be nullified if the very material used by the masses is made prohibitive in cost by a Tariff wall and if the importation of unsafe wires and cables is permitted unchecked, as at present is the case. It is important that Government should consider the whole question of importation of electric wires and cables from the point of view of safety of the consumer. My Committee very strongly urge that the existing duties on importation of wires and cables be abolished, and that suitable measures be instituted to test such importations at the port of entry in respect of quality, which will eventually put a stop to cheap and poor quality wires and cables being offered for sale, thus protecting the interests of the Indian Cable Co. and benefitting the consumer as well.

14. In conclusion I am to say that the representation, dated 24th June, 1931, addressed to you by Messrs. W. T. Henley's Telegraph Works Co., Ltd., Calcutta, has the unanimous and strong support of this Chamber.

### Southern India Chamber of Commerce, Madras.

(1) *Letter No. G.-658, dated the 10th July, 1931.*

#### PROTECTION TO THE MANUFACTURE OF ELECTRIC WIRES AND CABLES.

I am directed to refer to your Department Resolution No. 707-T. (1), dated the 11th May, 1931, in pursuance of which an application from the Indian Cable Co., Ltd., Calcutta, for protection of the manufacture of electric cables and wire has been referred to the Tariff Board. The Government are apparently not aware that there is at present only the applicant company which is interested in the manufacture of electric cables and wires. Considering the source of the capital invested in the company and the personnel of the Directors and superior grades of officers, my Committee have no doubt that it is essentially a non-Indian company working primarily for the benefit of foreigners. My Committee therefore regret that the Government of India should have so readily responded to the application of a foreign company for facilities to establish their monopoly in the market for electrical cables and wires in India.

The Government of India cannot be unaware that within the last few years much interest and activity have been evinced in hydro-electric enterprises and municipal schemes of electrification. Neither is there any doubt that many years will be taken before this country can be enabled to harness all her natural advantages for the development of electric power. It is, therefore, deplorable that at this stage of such development the Government should offer to impose on it an unnecessary and unwarranted burden. The whole of the country's potential wealth in electricity and her future industrial power as well as the interests of the whole mass of consumers are in this case massed against the capitalist exploitation of a single foreign company. This is entirely in contravention of the spirit of the Report of the Fiscal Commission, the principles enunciated by whom are sought to be put into practice by the present reference to the Tariff Board.

In these circumstances my Committee respectfully suggest that the Government will be well advised in withdrawing the reference to the Tariff Board, or if that be too late, to take no action on their Report.

Copy to the Secretary, Tariff Board, Simla, for information.

(2) *Letter No. G.-895, dated the 31st August, 1931, from the Southern India Chamber of Commerce.*

I am to state that my Committee having decided to oppose the application of the Indian Cable Co., Ltd., Calcutta, for protection to the manufacture of electric wires and cables, other than paper insulated cables, the Government of India was addressed, in the first instance, requesting them to withdraw the reference made to the Indian Tariff Board or in the alternative to take no measures for the protection of the industry. The Government of India have, however, replied that as the application is now before the Board the Chamber may address the Board direct.

My Committee desire to urge that a careful examination of the three main conditions as well as the other considerations explained by the Indian Fiscal Commission in paragraphs 97-99 and 119 of their Report would convince the Board that the present application has to be rejected. The Tariff Board would, of course be examining the application in the light of the conditions laid down by the Fiscal Commission and it is not my Committee's desire to influence the decision of the Board on this question on any other grounds at all. An important condition stipulated therein is the abundant supply of raw material, and the Board are well aware that the most important article of copper rods required for the manufacture is being imported. Another important point that ought to be elucidated before the present application can be supported is whether the industry is not likely to develop without protection, and whether the successful working of the concern for more than a decade, its reaching during the period

an annual output worth Rs. 25 or 30 lakhs without any special aid, and its management by a colossal organisation like the British Insulated Cables, Ltd., does not warrant the conclusion that the industry can develop without protection and continue to face world competition.

Another important consideration is whether the heavy annual burden on the consumer that the application contemplates is justified by the prospect of the whole needs of India being likely to be met by indigenous production with assured scope for internal competition. My Committee feel convinced that the applicant company would not be in a position entirely to supply the growing needs of India for electric cables and wires, neither are they inclined to believe that new concerns will develop immediately so as to create healthy internal competition. Whether the Indian consumer has to depend partly on foreign imports, or whether his needs are supplied entirely by the applicant company, the burden imposed on him by any protective measures that may be adopted would be too heavy and too prolonged.

My Committee desire to lay emphasis on one important condition laid down by the Fiscal Commission as to whether protection in this case would result in a net economic advantage to the country. The Tariff Board when confronted with a case which does not answer the previous conditions satisfactorily might fairly be expected to attach due importance to this crucial test of the country's net advantage. The manufacture of electric cables and wires is in a sense a basic industry on which depends the prosperity or failure of several allied industries. India is still on the threshold of industrial development, and an important factor which leads to low cost of production is cheap power. India's vast resources in electrical power remain to be tapped and expensive schemes of hydro-electric enterprises and other Municipal schemes of electric supply are just beginning to be launched or are in their infant stage; nothing would be a greater handicap to them than the sudden raising of the price of an important raw material to them. Their original calculations might be completely upset, leading even to the abandonment of enterprise; and the completed schemes also might find their wiring expenses mounting up so as to curtail business. The result would be that a good many of the existing and potential industries of the country would suffer by the lack of cheap industrial power, and might be unable to face world competition. In conclusion, my Committee would like to urge, that in computing the net advantage to the country, the Board would give due weight to the fact that the applicant company is predominantly foreign in capital and management, and that the profits of the company raised year after year at the expense of many indigenous industries and individual consumers are going to enrich foreign capitalists.

### **Punjab Chamber of Commerce, Delhi.**

*Letter No. 457/502/31, dated the 13th June, 1931.*

With reference to the Resolution of the Government of India, Department of Commerce, No. 707-T. (1), dated the 11th May, 1931, referring to the Tariff Board, an application from the Indian Cable Company, Limited, Calcutta, for protection to the manufacture of electric wires and cables other than paper insulated cables we are directed to suggest that the best means of affording protection to the industry, should in the Board's view a case be made out for protection, is by means of a bounty rather than by an increase in the tariff duties, for, considering the extent of this Company's production in relation to India's entire demand, it were better that a bounty be given rather than that the price of electric wires and cables be raised to all consumers by the enhancement of customs duty.

### The Karachi Chamber of Commerce.

*Letter No. 20 (a) C.-23, dated the 4th July, 1931.*

I am directed to refer to Government of India, Department of Commerce, Resolution No. 707-T. (1), dated the 11th May, 1931, on the above subject, which has received consideration.

In reply I am to lodge, on behalf of this Chamber, a protest against the application for protection to the manufacture of electric wires and cables, on the ground that the increased cost of these articles as a result of any protection that may be afforded will automatically fall upon consumers, i.e., the public generally.

### Gwalior Chamber of Commerce.

*Letter dated 18th July, 1931.*

I am directed by my committee—Gwalior Chamber of Commerce—to request you as under:—

My Committee considered your notifications published in *Indian Trade Journal*, dated the 21st and 28th May, 1931, of the above subject in its meeting held on 18th instant have expressed their views as follows:—

- (1) No enhancement of duty on British Cables is necessary nor desirable by the Indian Cable Co., Ltd., and the present duty should remain as it is.
- (2) Due measures should be taken to prevent the import of inferior quality of wires.
- (3) Due protection to the Indian Industry is necessary on uninsulated conductor or weather proof conductor over 1/80 s. inch.

I hope the Indian Tariff Board will give this my Committee's views a very careful consideration.

### Bengal National Chamber of Commerce, Calcutta.

*Letter No. I. L./M. S.-31, dated the 20th July, 1931.*

*Subject:—REFERENCE OF AN APPLICATION FROM THE INDIAN CABLE COMPANY TO THE TARIFF BOARD FOR PROTECTION TO THE MANUFACTURE OF ELECTRIC WIRES AND CABLES OTHER THAN PAPER INSULATED CABLES.*

Referring to the Resolution of the Government of India in the Department of Commerce No. 30-T. (20), dated the 11th May, 1931, on the above subject, copy whereof was forwarded to this office by the local Government, I am directed by the Committee of the Bengal National Chamber of Commerce to place the following observations for consideration before the Tariff Board.

2. The Committee understand that the Indian Cable Co. does not satisfy the conditions of an Indian company being in fact a purely European concern managed by the British Insulated Cable Co., of England. Indians have no great interest in this concern beyond the fact that only a certain number of workmen are employed by the Company and a few men receive practical instruction as skilled labour.

3. The Committee have been reliably informed that the present management of the Company or its officials in India do not impart any higher training to Indians; nor do they make any endeavour to popularise their

products. They mainly count on Government support and, in fact, they are already enjoying a kind of protection as the Government buy most of their requirements from this concern. Owing to this patronage they have so far shown no interest in introducing their products into the market or in getting their products known to the public by business propaganda and adequate arrangement for advertisement. If the company is not doing well in spite of the governmental support, it must be to a great extent due to inefficient management, want of business propaganda and decide to the fact that large percentage of the profit is drained out of the country as agency commission, royalty, etc. This is further corroborated by the fact that the Company is already sheltered against foreign competition to the extent of 20 per cent. on account of the duty now levied on imported cables and wires.

4. The Committee very strongly feel that the imposition of a further protective tariff will be greatly detrimental to the future development of Indian firms in Electrical and allied lines in which further expansion is extremely desirable. Capital will naturally be very shy so far as these latter establishments are concerned. The Customs revenue of the Government will also suffer a set back in effect as there will be a consequential fall in the indents of electrical goods from abroad on account of the inflated prices of an important accessory material like cables.

5. It is reported that the products of the Indian Cable Co. are in no way inferior to any foreign cable including Henley's Callender's or any other C. M. A. cable and that their products have been found decidedly better than the foreign cables when tested from old stocks of two or three years' standing. Henley's claim of superiority does not hold good in India although Callender's are best in the market. The Committee would suggest in this connection that cables should be tested in the Government Test House regarding all points as set out in the British Standard Specifications, before any claim of superiority by any concern is accepted. Whatever may come out of such tests the Committee presume from the reports so far obtained that the manufactures of the Indian Cable Co. have attained a sufficiently high standard such as would not call for any protection from the technical point of view against foreign competition.

6. The fact has been brought to the notice of the Committee in support of the claim for protection of the Indian Cable Company that about three years ago while the C. M. A. raised the prices of cables compelling the Indian and British Governments to place their orders outside the ring, the Indian Cable Co. rendered a substantial help to the Government of India. The Committee do Government to any obligation to reciprocate by granting protection in the present instance against obvious objections for if the Government were benefited, by the service of the Company the latter should have been amply compensated by the patronage so far accorded to it by the Government.

7. In urging for refusal of protection to the Indian Cable Co., the Committee would clearly emphasise that even as a matter of principle protection should be given to industries, only when they have proved conclusively that they have done everything in their power to run the concern efficiently and that even then they have not been able to face competition. They should also prove that protection is tentatively necessary for period to organise the infant industry to fight and hold its own against well-established foreign concerns of long standing. Employment of a large percentage of pure Indian capital and labour; inclusion of Indians in the directorate; training and engaging a proper proportion of suitable Indians in the higher services of the firm should also be conditions precedent to granting any protection in any form. Such conditions, to which the Indian Cable Co. does not strictly conform, should receive their due measure of attention from the Tariff Board in deciding on granting protection in the present case.

3. In conclusion, the Committee would invite the attention of the Tariff Board to the most significant fact that the local manufactures of cables

constitute at present only a very small fraction of the total consumption of similar wires in India. If in such circumstances the prices of cables both indigenous and imported were raised high by the imposition of a fresh protective tariff the electrification schemes of mofussil districts would be seriously retarded and it would further entail a great hardship on subsequent processes of manufacture of electrical and allied lines.

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### Calicut Chamber of Commerce, Calicut.

*Letter dated 24th July, 1931.*

Messrs. W. T. Henley's Telegraph Works Co., Ltd., Calcutta, has sent to this Chamber copy of their letter dated 24th June, 1931, to you on the above subject. This Chamber supports their contention that the assessment to duty of all electric wires and cables should in the interests of consumers be reduced to *nil* as it is at present for "power" cables. Also that a duty on bare copper wires for power purposes, at present assessed at *nil* duty, should remain at this assessment.

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### Indian Chamber of Commerce, Calcutta.

*Letter dated 6th August, 1931.*

I am directed by the Committee of the Indian Chamber of Commerce, Calcutta, to refer to the resolution of the Government of India, Department of Commerce, dated Simla, the 11th May, 1931, referring the question of grant of protection on the manufacture of electric cables and wires in India, to the Tariff Board for consideration, and to forward herewith their views on the application of the Indian Cable Co., Ltd. for protection to the manufacture of electric cables and wires other than paper insulated cables.

My Committee have carefully considered the question of the grant of protection to this industry and they have arrived at the conclusion that the grant of protection to this industry should be strongly opposed for the following reasons:—

The Indian Cable Co., Ltd. which is the only Company manufacturing electric cables and wires in India is entirely non-national in character having a large percentage of foreign capital predominantly non-Indian Board of Directorate, and entirely foreign management. There is no justification for the imposition of any duty on imported electric cables and wires and for penalising the consumers in order to benefit a non-Indian concern working inside the country. The Committee are informed that the holding of Indians in the share capital has been dwindling from 1920-21 onwards and at the end of 1930-31 Indians held 56,160 shares as against 79,070 held by non-Indians. In this connection, however, my Committee would invite the attention of the Tariff Board to the fact that in order to complete the factory and bring it to a producing stage, the British Insulated Cables Co., Ltd., issued 6 per cent. cumulative preference shares in October, 1922 and took over the Managing Agency of the Company. Of 1,28,775 shares offered to the Indian Shareholders only 320 were taken up by Indians. The capital employed therefore in running the factory is predominantly foreign, and the first charge on the profits of the Company thus will be of the Preference Shareholders who are largely foreigners.

India imports annually copper wire and copper cables worth about Rs. 100 lakhs. If the Indian Cable Co. get protection they have asked for, they hope to be able to manufacture copper wire and cables and other materials worth about Rs. 80 lakhs while the rest will have to be imported. My

Committee are informed that the value of the output of their factory in the year 1929 was about Rs. 30 lakhs and in the year 1930 about 25 lakhs, due to the fall in value. It will thus be seen that their producing capacity is not very large.

The Indian Cable Co. further contend that their proposal for the imposition of 20 per cent. duty on copper wire will affect the imports of cable to the extent of Rs. 24 lakhs only. Their estimate of the additional burden imposed on the country would therefore be Rs. 4.8 lakhs per year, and it would be necessary to continue the protection for a period of 3 years in order to establish this industry. Additional protection at the rate of Rs. 4.8 lakhs of rupees per year will in three years amount to over Rs. 14 lakhs and will be equivalent to more than half the capital of the Company. The burden therefore that will fall on the consumer will be very heavy. The British Insulated Cable Co., Ltd., is one of the biggest British Electric concerns having factories not only in England but in Australia and South Africa as well. The factories in the two latter places have been of course installed with a view to take advantage of the protective tariffs imposed by Australia and South Africa. If a huge concern of this character requires such heavy protective duties that the burden on the consumers in three years will amount to more than half the capital invested in this enterprise, my Committee feel that the grant of protection cannot lead to the permanent establishment of the industry in this country. Even if the Indian Cable Co. is able to go on after three years without any protection it would be impossible for other Indian factories to grow up. They will be faced with competition with an organisation like the British Insulated Cables Co., Ltd., the Managing Agents of the Indian Cable Co., Ltd., with world-wire ramifications and having the benefit of technical experience and marketing facilities which no concern in India can aspire to possess in the near future.

My Committee would like to examine here the advantages, if any, which the Indian Cable Co. contend, accrue to this country, due to their operating here.

Firstly, the Indian Cable Co. contend that Rs. 1,41,000 are paid in wages in India, secondly, that Rs. 35,000 are spent on fuel and electric power, thirdly, that Rs. 71,675 are spent on railway freight and cartage and fourthly, that indigenous articles are purchased to the extent of about Rs. 2,30,000. Out of the total turn-over of the Company amounting to roughly Rs. 25 lakhs per annum, nearly 1½ lakhs goes to the wages bill that is, roughly it works out to the extent of about 6 per cent. of the total output on labour. The item on fuel and electric power is very small. The railway freight and cartage would perhaps accrue to the railways in any case, because if the goods are not manufactured in India and are imported they will still have to be sent to the places of consumption all over India. With regard to the last item of the purchase of indigenous articles my Committee would point out that many of these articles are articles which are produced outside India. They would also point out here that in the cost of finished wire, almost 80 per cent. represents the price of the raw material, *viz.*, copper rods which are now imported from America, free of duty.

It is the submission of my Committee that the burden of about Rs. 5 lakhs per year proposed to be imposed on the consumers for a period of a few years is totally incommensurate with the advantages likely to accrue to India, from this foreign concern operating in India.

Further, the fact should also be borne in mind that the imposition of any duty on imported electrical wires and cables will increase the capital cost of several hydro-electrical Works and Electric Supply Corporations which are in a process of construction or actually in operation in India. It will consequently increase the cost of the private consumers and industries using electric power. Cheap power is essential for the development of Indian industries. Any support that is granted to the Indian Cable Co., by way of protective duties will operate as a burden and a handicap



to Indian industries using electric power. The suggested specific duty on small insulated wires will increase the cost of house-wiring. In the present stage of India's development, any imposition of any duty will operate very harshly on the people. The Committee are therefore emphatically of the opinion that no burden should be imposed on the country by imposing any protective duty on imports of cables and wire, etc., as suggested by the Indian Cable Co. They trust the Tariff Board will reject, on national grounds, for granting their claim to protection.

### Bengal Chamber of Commerce, Calcutta.

*Letter No. 2866-1931, dated the 18th August, 1931, to the Secretary to the Government of Bengal, Commerce Department, and copy forwarded to the Secretary, Tariff Board.*

The Chamber has recently had under consideration the reference which is now before the Indian Tariff Board in connection with the application made by the Indian Cable Co., Ltd., for protection to the manufacture of electric wires and cables other than paper insulated cables. In their Tariff Resolution No. 707-T. (1), dated the 11th May, 1931, the Government of India, in the Department of Commerce, invited firms and persons interested, who might desire that their views should be considered, to address their representations to the Secretary to the Board. As stated, the Chamber has had the matter under consideration, but the Committee have decided not to submit any representation to the Board, either for or against the application, by reason of the fact that the interests of certain members conflict with those of other members.

2. While this is so, certain points have been raised in the course of the discussion which the Chamber desires to bring to the notice of Government. It has been represented, both on behalf of the Indian Cable Co., Ltd., and on behalf of importers, that large quantities of wires and cables of inferior quality are now being imported into India, and that it is most desirable that protection against such should be afforded to consumers. The Committee of the Chamber agree that this aspect of the question is one which should have the serious consideration of Government apart altogether from the question of whether or not a protective duty should be imposed on certain classes of wire and cable. There is naturally an attraction, to the consumer, in a low priced material, and it is precisely on this account that he needs the protection which it is sought to give him in the Electricity Rules. But the protection which is now afforded by these does not proceed far enough, and it seems to the Chamber that consideration should be given to the framing of conditions in regard to test which all wire and cable will have to satisfy before it is permitted entry into the country. It has to be kept in view, as indicating the necessity for the imposition of a stringent test, that it is not a difficult matter to give a low quality cable a sufficiently presentable appearance to deceive even persons with considerable technical knowledge.

3. A further important point which should be remembered is that in this matter the average consumer is entirely in the hands of the contractor, with whom he engages to complete an installation on the basis of a price per point installed. The application of more stringent tests would exclude a considerable quantity of the inferior quality cable that is now finding its way into India, and would thus, besides being very necessary in the interests of the safety of the public, give a measure of protection to the manufacture of cable in this country. Assistance to this local manufacture would also be afforded, to some extent at any rate if, instead of the import duty being *ad valorem*, it were on a specific basis, because in this way a direct inducement to the use of poor quality cable would in some degree disappear. But preferably, as has been indicated, the chamber would like to see prohibitive measures taken against the entry of material—

not only wire and cable, for that matter, but electric apparatus and appliances generally—of poor and unsafe quality.

4. The Chamber desires to take the opportunity of referring to another matter which concerns the interests of consumers. It relates to the question of bringing into force, in Bengal, Rule 40-A of the Indian Electricity Rules, 1922, which provides for the grant of certificates of competency and licenses to electrical contractors and wiremen. The Chamber has on more than one occasion pressed that early action should

Letter No. 5911-Com., dated the 13th December, 1930, from the Government of Bengal, Commerce Department, to the Chamber.

be taken to bring the rule into force in this province, but so far financial reasons have prevented Government from introducing it. The Chamber desires again to urge on the Government of Bengal the importance of re-considering the question. The financial position is fully appreciated, but the Chamber cannot conceive that the expense of introducing the rule would be heavy, and they think that it would certainly be fully justified in the interests of the greater safety that the adoption of the rule would afford to consumers. The Chamber strongly commends the matter to the renewed consideration of the Government of Bengal.