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PLANNING AND DEVELOPMENT
DEPARTMENT

OFFICE OF THE INDUSTRIAL ADVISER

SECOND REPORT

OF

THE IRON AND STEEL (MAJOR)
PANEL

(Re-rolling Mills ; Engineering Industries ; Alloy, Tool & Special Steels)

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CHAPTER I

REROLLING MILLS

ORIGIN AND GROWTH OF THE INDUSTRY

During the Statutory enquiry held by the Tariff Board in 1933-34, complaints were received from certain Rerolling Mills situated in Calcutta, Benares, Ghaziabad, Cawnpore, Lahore and Negapatam, against the refusal of the Tata Iron & Steel Co. Ltd. to supply them with billets and at the same time against what was alleged to be unfair competition by that Company against them in the distant markets. Besides some very small mills which rerolled scrap, there were only about half a dozen mills which claimed to be interested in the supply of billets. The Tariff Board after a very careful examination of the evidence produced before it by the rival groups came *inter alia* to the following findings, *viz* :—

1. " We believe that, as in England and elsewhere, there is a place for these rerolling mills in a well-organised industry and that the growth of a re-rolling section of the industry capable of dealing with small orders, even of steel products which may compete with the output of the main steel producing works, will be a natural and desirable outcome of the present tendency."
2. "The Company has claimed protection of semi-finished products in order to prevent the competition of these rerolling mills, using foreign steel, on the ground that this competition will reduce the output of the basic industry. We see no valid ground for this fear, but on the contrary consider that the Company as the sole representative of a protected parent industry has underestimated its responsibility to the smaller industry in the matter of the supply of raw material. It must not be forgotten that the large sums which have been found both from public funds and in the form of protective duties for the support of the steel industry, while deliberately devoted to the establishment of a strong basic industry, were never intended to create a monopoly ; and if circumstances have combined to create a monopoly, then there is the greater need of insisting on the Company exercising its power in the interests of the industry as a whole."
3. "So far as we can judge from the Company's programme, there should be available a surplus production of billets amply sufficient for the present needs of the re-rolling industry."
4. "The removal of the revenue duty on billets imported from abroad is an indispensable part of the scheme of protection as outlined by us Although there is capacity on the Steel Company's sheet bar and billet mill to satisfy the requirements of re-rollers during the next few years, difficulties often arise not merely regarding the prices at which billets are sold but also the regularity and continuity of supply. We think that the difficulties of re-rollers can only be solved by the provision of an alternative source of supply at no increase in cost. Till another steel-works with the necessary equipment is created, imports must provide the only alternative source of supply."

It would be unreasonable to deny the wisdom of the Tariff Board in having recommended the abolition of the revenue duty on imported billets and that of the Government in accepting its recommendation in the circumstances then existing. But it is doubtful whether the Tariff Board fully realised the effect

of the method by which the fair selling price of Indian billets was fixed entirely with reference to Continental prices. These were regarded as so uneconomic that the U. K. found it necessary to impose substantial import duties just before the Tariff Board's own enquiries were undertaken. The price fixed for the domestic billets was uneconomic judged by any normal standards. The average works costs of billets were assumed to be Rs. 43 per ton. A sum of only Rs. 10 for overhead and profit was added to this amount to give the Tata Iron & Steel Company a fair selling price of Rs. 53 f.o.r. works. The average incidence of overhead and profit was Rs. 36 per ton on all saleable steel. But by reason of the low rate allowed on the billets the average incidence on the rest of the steel rose to Rs. 47 per ton. The effect of this was that though the Steel Company was none the worse off, the consumers of other steel had to pay Rs. 11 per ton more to subsidize about half a dozen re-rolling mills.

The genesis of the re-rolling industry and its subsequent extension is traceable to the observations of the Tariff Board from which we have given some extracts and the removal of the revenue duty. Within a year seven or eight more mills came into being and by 1939, their number had risen to about 32. Their nominal capacity was estimated at about 140,000 tons per annum and their monthly output at about 5,000 tons, excluding such secondary producers classified as A-1, viz., Indian Steel & Wire Products Ltd., Tatanagar; Guest Keen & Williams (India) Ltd., Shalimar; Eagle Rolling Mills, Kumardhubi; and Indian Rolling Mills Ltd., Negapatam.

Another cause which stimulated the expansion of the industry was the result of the policy of protection. A heavy duty of Rs. 39 per ton was imposed on Continental bars. Soon after the new scheme of protection came into operation, a gradual world revival of the steel industry took place and prices in India also showed a marked upward tendency to which we have referred in Chapter II of the First Report. A better market also made it unnecessary for the Steel Company to enter into competition against the re-rolling mills. At the time the Tariff Board reported, the landed price of foreign billets c.i.f. Calcutta was Rs. 64 per ton. There was some rise in this price later, but apparently it was not in the same proportion as that in the domestic price of the finished product. The demand for steel was greater than the Steel Company was able to meet. Some of the re-rolling mills especially of the better type found in consequence this business a very profitable one. In these circumstances it was natural for the industry to forget the limitations prescribed or the warnings given by the Tariff Board.

2. For practical purposes no special concession was given to the products of the re-rolling mills in regard to the fair selling price. The fair selling price estimated for the Steel Company f.o.r. Tatanagar was Rs. 94. The minimum selling price of bars rolled by the re-rolling mills was Rs. 98.6 f.o.r. works calculated as follows:—

Imported billet per ton	64.0
Wastage	6.4
	<hr/>
	70.4
Less credit for scrap	2.0
	<hr/>
	68.4
Rolling charges	23.0
Depreciation, interest and profit	7.2
	<hr/>
Fair selling price f.o.r. works	98.6
	<hr/>

3. The Tariff Board regarded a figure of Rs. 108 as the minimum fair selling price f.o.r. port for a re-rolling mill as against Rs. 106 for the Steel Company. They then proceeded to observe :—

“ In our opinion, except in the case of special sections not rolled by the Tata Company, the scope of re-rolling mills in India in the near future will be practically limited to supplies against urgent requirements or in the more distant markets which the basic industry may be unable to provide economically.”

4. As regards the general level of the efficiency of the industry they made some remarks which hold true even today as we shall point out in a later paragraph. With the exception of three mills which were named, in the opinion of the Tariff Board :—

“ the industry is very new and inexperienced, and for the most part poorly equipped. At present they re-roll scrap material only, being useful in consuming scrap from the railways..... Their total output does not at present amount to more than a few thousand tons. So far as they use scrap only they can have no permanent future. Their product is not of high quality, the quantity of scrap available is strictly limited and already the demand is raising the price It is reasonably certain that they must improve or be absorbed by the more efficient mills that will re-roll billets in addition to scrap.”

5. In so far as the Re-rolling industry bases its claim to recognition on the Report as an integral part of a well-organised steel industry, it is now pertinent to examine in the light of its recommendations what precisely the Tariff Board contributed in support of such a claim. The following inferences can reasonably be drawn from the enunciation of the policy as disclosed by the extracts given above and from its recommendations.

6. (1) For similar products substantially the same selling price was to be expected by the re-rollers as that fixed for the major works.

(2) The future of the industry was limited to supplies of—

(a) special sections not rolled by the major works ;

(b) products against urgent small orders ;

(c) products for the more distant markets which the basic industry may be unable to provide economically.

This last condition had reference mainly to the distant ports such as those of Bombay, Madras, or Karachi, where imported billets might lead to more economic production than to the interior where the freight on billets would not permit of their use on a scale sufficiently large so as to make the products cheaper than those which the major works might be able to supply.

(3) The mills rolling only from scrap had no permanent future.

(4) With a few exceptions the industry was inexperienced and for the most part poorly equipped.

(5) If the Steel Company was unable or unwilling to supply billets the mills had an alternative supply from imports.

(6) There was no obligation on the Steel Company to supply any billets even when there was a surplus.

(7) No claim was put forward by the mills that the Steel Company was at any time to sell billets by cutting down the output of its own finishing mills.

7. From what has been stated above it will be realised that there was nothing in the recommendations of the Tariff Board to suggest that any special

rights or privileges were conferred on the re-rolling industry. Nor were any claimed by the industry excepting the liberty to import the billets free of duty, if they wished to do so on their own account and at their own risk. The rollable scrap in the country was left an open market.

8. It is since the war that rights and privileges such as those now claimed by the Re-rollers' Association have been put forward in support of a recognised place in the steel industry of the future. It is therefore necessary for us to examine the history and the basis of these claims and then consider how far they deserve to be entertained and under what conditions.

9. Before the war there were about 32 mills, excluding A-1 class, with an estimated capacity of about 140,000 tons per annum and an output of about 5,000 tons per month. After the outbreak of the war and by 1940 several new rolling mills were erected. In July 1940, the Steel Re-rolling Mills' Association was formed. It was sponsored by the Government with the view to co-ordinating supplies for war requirements and to replace the shortage in the market. The first Committee consisted of Mr. J. C. Mahindra, the Adviser on Steel Supplies, as Chairman, two other Government nominees and 5 representatives of the re-rolling mills. At that time the total output of all the re-rolling mills excluding A-1 class, was about 47,000 tons per annum.

10. By April 1941 the Association had 24 members. Many more rolling mills had been started since 1940 though the available scrap and billets were said to be barely sufficient for the members already forming part of the Association to satisfy even 33 per cent of their requirements. In September 1941 the Government issued a public warning that in the event of Government control of scrap and steel, only those mills which had started on or before the 1st of September 1941 would be entitled to the supply of these raw materials. In a press communiqué, dated the 14th October 1942, Government declared their intention to deal with only one Trades Association and invited all Re-rolling Mills started on or before the 1st of September 1941 to join the Re-rolling Mills' Association. This decision had been reached, it was stated, "in order to provide equality of opportunity to mills started before September 1, 1941, to secure the efficient conversion of steel, to safeguard established mills as far as possible against failure in the supply of scrap and to avert profitless competition." As a result of this decision, 55 more mills were enrolled as members entitled to the supply of raw material. Excluding the four A-1 class mills the total number increased to about 75. As far as our information goes, there were in all about 130 mills then existing.

11. It is difficult for us to appreciate why as many as 75 mills, not to mention many others which were not members of the Association, were required for the quantity of material they were expected to roll or what obligation there was on the part of Government to provide equality of opportunity where no such admitted inequality already existed between the various units. The production of these mills was as follows : —

Year	Tons
1941	57,711
1942	37,796
1943	60,526
1944	75,636 (Provisional)
July 1944 to June 1945	76,663

12. From the above figures and those we have given in paragraph 9 it will be noticed that even before the outbreak of the war there was more than enough capacity in the existing rolling mills to produce the above tonnage, and except for the profit motive stimulated by war conditions we can find no reason for so many more rolling mills coming into being. Government's official recognition of the industry in this form was perhaps not unnaturally taken as an acknowledgment of existing vested interests and has since been put forward as a ground for substantiating a claim for a permanent place in the organisation of the whole steel industry.

13. Apart from making arrangements for so many mills to function, "equality of opportunity" was provided by classifying the mills into four categories and conversion rates were made payable to them in inverse ratio to their efficiency from April 1942 as follows:—

Reference	A-1	A	B	C
	(Per ton)			
	Rs. as. p.	Rs.	Rs.	Rs.
Delhi meeting dated 24th April 1942	45 0 0	55	75	85
Meeting dated 4th January 1943 from 1st November 1942	45 0 0 (a)	70 (a)	90 (a)	100 (a)
	35 0 0 (b)	60 (b)	80 (b)	90 (b)
S. P. N. C. Record Note dated 4th May 1943 from 1st May 1943	57 8 0	70	90	100
	47 8 0	60	80	90
Joint meeting from 1st November 1943 in respect of all deliveries	55 0 0	75	100	110
		85	110	120
S. P. N. C. Record Note dated 7th December 1943	65 0 0	85	110	120

14. We can discover no principle, except the relative degree of efficiency, by which these mills were classified under four categories or how the different conversion rates were arrived at excepting on the basis of the number of shifts they were allowed to work. The conversion rates were fixed apparently by negotiation and, except in a few cases, by some rough and ready method and we cannot regard these rates as any basis for determining their reasonableness or of the efficiency of the mills. The conversion rates originally fixed for the A-1 class bear some comparison with the rate of Rs. 34 per ton allowed by the Tariff Board in 1938. The increases shown in the rates fixed by the Government from time to time also for these mills do not on the whole appear to be excessive by comparison with those allowed to the major producers for similar products.

15. The cost of the finished products was increased also by arranging that an endeavour would be made to supply scrap and/or billets, to mills in category A for two shift working and to category B for one shift working though normally a rolling mill is expected to work 15 to 17 shifts a week to ensure economy. Mills in category C were promised whatever was left after the requirements of the other two categories had been supplied.

16. Owing to the lack of fuel many of the mills began to be closed down from 1943 onwards. In July of 1944, a statutory order was served on 76 members of the Association directing compulsory closure of their mills. Compensation 'on care and maintenance' basis was paid to them from the Equalization Fund.

17. After July 1944, four A-1, eight A and nine B class mills were allowed to function and as a war measure, arrangements were made to supply them with scrap and indigenous or imported billets. Though we do not know what the aggregate cost of the arrangements has been to the Government, there is little doubt that it must have been heavy. About 70,000 tons of billets were purchased between July 1944 and June 1945, of which about 65,000 tons were imported for the 17 A and B Class Mills. Irrespective of their distance from the source of supply the billets were supplied f.o.r. destination at Rs. 150 per ton.

18. The retention prices for Indian billets were as follows :—

	Rs.
Tata	196 per ton.
S. C. O. B.	187 " "
Electric	225 " "

The landed costs of foreign billets were :—

	Rs.
From U. S. A. on L/L	228.75 per ton.
Canada	253.62 " "
Australia	225.75 " "

19. From the information supplied to us by the Iron & Steel Control, we gather that during the period July 1944 to June 1945, 34,962 tons of billets were imported from the U.S.A., 8,688 tons from Canada and 21,786 tons from Australia. Similarly approximately 1,000 tons of billets were purchased from Messrs. Tata Iron & Steel Co., Ltd., and about 4,000 tons from the Steel Corporation of Bengal. The total quantity of billets thus purchased was 70,429 tons and at the rates mentioned in paragraph 18, their total approximate purchase price amounted to Rs. 1,60,61,464. These billets were supplied to the Re-rolling Mills at Rs. 150 per ton f.o.r. destination. The Government therefore realised from the sale of these billets Rs. 1,05,64,350, incurring a loss on the transaction of Rs. 54,97,114 on the price alone.

20. As the billets were supplied f.o.r. destination, the Government had to bear the transport charges in full. The Iron and Steel Control has not been able to supply us with any information on freights paid. Therefore, we take for our calculations, the average freight of Rs. 24 per ton paid by the only Primary Producer before the war, as shown in paragraph 70 of Chapter II of the First Report. The loss on freight works out on this basis to Rs. 16,90,296. As many of the mills are situated in the U.P. and the Punjab where the freight chargeable varies from Rs. 30 to Rs. 50 per ton, our estimate is on a conservative basis. This does not complete the picture. As indicated in paragraph 13, the A and B class re-rollers were allowed conversion costs of Rs. 85 and Rs. 110 per ton respectively for their products. The retention base price allowed to the major works for similar products was between Rs. 215 and Rs. 225 per ton. If the difference between this price and the price paid to the major works for billets is regarded as their conversion costs, the further loss incurred on the conversion charges allowed to the re-rollers is increased approximately by Rs. 30/40 lakhs. Therefore the total loss made by the Government on the transaction must have been over a crore of rupees. If it was relevant for us to consider what other sections of the Industry were supplied with raw materials by the Government for war purpose, we could point to many instances, but they will not alter the fact that in this case a heavy loss was incurred by the Government.

21. It is now perhaps worthwhile examining how different has been the development of the Re-rolling Industry from what was contemplated by the Tariff Board of 1933-34 to the observations and recommendations of which may largely be traced the origin and the subsequent basis of its claims. The outbreak of the war made it necessary for the Government to make the best arrangements possible under the circumstances for the production and distribution of all forms of iron and steel products, mainly for munitions and partly for civilian purposes. The production and supply of these products was a far more vital consideration than their cost to the public exchequer, and rightly so. At first, there was no control over the prices of the Re-rolling mills and the business became so profitable that many new mills were improvised and brought into operation. In 1942, control was introduced as we have explained. This control created conditions for the mills which though they might have been justified by the worst year of the war from India's point of view, could not be contemplated during peace time when considerations of cost and the burden on the consumer have to be recognised. The case put forward by or for the Re-rolling mills is sometimes made to rest substantially on the maintenance of the same or similar conditions. We have already discussed these in an earlier paragraph and would summarise them as follows in order to emphasise how impossible and contrary to the national interests it would now be to entertain such a case as part of any ordered economy :—

- (1) The principal raw materials consisting of scrap or billets were supplied to them at a uniform price f.o.r. works. This price was far below the actual cost to the Government which had also to bear the freight. While the Government suffered a heavy loss, any disadvantage to which the mills were subject by reason of their location with reference to the sources of their raw materials was wiped out.
- (2) In order to secure the output, special conversion rates were fixed and the mills were divided into four categories. The least efficient of them received the highest conversion costs. It is the recognition of this principle which is in no small degree responsible for the support which the small mills have been accorded by certain sections of the public. It will have been observed that the Tariff Board not only treated all mills on a similar footing but gave them approximately the same selling price as to the major works.
- (3) The number and capacity of the mills were so much in excess of the quantity of the raw materials available that in order to keep them in operation it was impossible for them to work the normal number of 15 to 17 shifts per week and in consequence their operation had to be confined to two or a single shift per day involving a considerable wastage and increase in costs.
- (4) All competition was cut out and an easy market was found for all their products without incurring any business risk.

II—REORGANISATION AND RATIONALISATION

22. In our original directive no special reference was made to the question of the Re-rolling Mills. Subsequently in April 1945, the following paragraph was added to the Special Directive :

“ To consider the question of the Re-rolling Industry in the future and to make such recommendations as may be necessary for the re-organisation and rationalisation of the Re-rollers ”.

23. It was also arranged that the Supply Department would take the necessary steps to procure the services of a Re-rolling Mills expert to visit India and to report to the Government through the Panel on the standard of efficiency and equipment of the Re-rolling Mills in the country. This arrangement was made at the end of March 1945. An expert was selected by the Supply Department and arrived in India about January 1946. It is not likely that any report can be completed by him after a detailed inspection and examination of so many mills scattered all over India for us to consider it before we submit our recommendations to the Government. The expert's report may have to be examined and considered by some other authority which the Government may be advised to appoint hereafter. In the meanwhile, we would state that our own inspection of several of the mills has left no doubt in our minds that short of a complete overhaul, re-equipment and even a change of lay out, it will be difficult for any impartial critic to assign to many of them a recognised place in the steel industry of the future. In the absence of fuller information which is now being collected, we are unable to make any specific proposals as to the form the reorganisation or rationalisation should take. We therefore, propose to limit our recommendations to the assistance or recognition which should be accorded to the mills on the assumption that appropriate steps will be taken to qualify them for receiving such assistance or recognition. We shall at the same time lay down the essential conditions which they must fulfil in order to be so qualified.

24. Soon after the receipt of the Special Directive, we sent out a questionnaire to the Steel Re-rollers' Association and to 142 Re-rolling Mills. We received a good many replies, but with barely one or two exceptions little useful information was to be found in them. We could not get any reasonable idea of the kind nor quantities of products they manufactured or of their real costs of production. After considerable delay we received a letter dated the 25th September, 1945, from the Association. This was a disappointing document, and we could not regard it as useful either from the point of view of the Association or of ourselves. Some arguments and claims were put forward which it was impossible for us to accept or entertain. On the 28th September we had a conference with the Chairman and several members of the Association, at which their evidence was recorded. We took this opportunity of explaining to the Association what precisely was the sort of information we required to enable us to advise the Government on the place of the Re-rolling Mills in the general organisation of the Steel Industry. On the 5th October 1945, we wrote to the Association a letter in which we set out the principal conditions which were essential, though not exhaustive and which they must fulfil before any recognised place could be assigned to them. These were as follows :—

- (1) That the Re-rolling Mills are properly equipped, adequately financed and efficiently managed—efficiency being judged by works costs, age and nature of the plant.
- (2) That they roll special products which are required in relatively small quantities for special purposes and which cannot be more economically produced and distributed by the bulk production units, having proper regard for the location of the markets to be served.
- (3) That the basis price paid for these products should bear a close relation to the basis price payable to major units of the same class for similar products and conform to a list of extras for size and service.

On the 21st of December 1945, we received a reply from them in which it was stated that the Association had decided that full members should consist of mills which fulfil the following conditions :—

- (a) Each mill should be well built, adequately powered and properly equipped to roll from billets ;
- (b) The mills should be adequately financed ;
- (c) Primarily the mill should roll special products which are required in relatively small quantities for special purposes and which cannot be more economically produced and distributed by bulk production units having regard to the markets to be served. But additional tonnages of ordinary sections will be necessary to provide practical rolling programmes especially during the transitional period ; and
- (d) The productive capacity of the mill should be sufficient to provide for the wide distribution of overheads which is necessary if the cost to the consumer has to be kept reasonably low.

25. It was stated also in that letter that these conditions substantially covered the three points raised in our letter of the 5th October.

It will be observed that the conditions mentioned in their letter did not substantially cover all the three points. The most important of the conditions mentioned in our letter of the 5th October was as regards the basis price and this has not been accepted. As we have explained in an earlier paragraph, the fair selling price fixed for the Re-rolling Mills by the last Tariff Board closely corresponded to the basis price fixed for the Tata Iron and Steel Co., Ltd. But the Re-rolling Mills have enjoyed much higher prices which varied according to the degree of efficiency, size, equipment, etc., of the different categories of mills. This principle, as we have already suggested, can no longer be recognised. The prices to be expected by all the Re-rolling Mills should bear close relation to the basis prices payable to the major units.

26. In condition (d) of their letter they suggest that the capacity of each mill should be sufficient to provide for the wide distribution of overheads which is necessary if the cost to the consumer has to be kept reasonably low. We agree with this proposition. But it is difficult for us to accede to the very large demand they have made for the supply of billets in order to fulfil this condition. In list (a) attached to their letter they mention 24 mills which, they say, qualify for full membership of the Association. These include three of the A-1 class mills and all the mills which were classified as A and B, and were allowed to function after the other mills had been closed down in July 1944. The quantity of billets required is stated to be 485,000 tons per annum, or about 40,500 tons per month. Excluding 11,000 tons of billets to be supplied to A-1 mills, the requirements amount to 29,500 tons per month or about 355,000 tons per annum. On what basis this estimate is made, we are unable to say except that the Association wants to keep as many mills going as possible by working a fewer number of shifts or in some other way. But as we have already pointed out, the maximum output of these mills has been in the region of 75,000 tons per annum, whilst before the war and many of them were in existence then, it was less than 50,000 tons. It is impossible to agree to the allocation of billets in such large quantities in the absence of any evidence that their products will be absorbed by the market. Many of these mills are capable of rolling several of the sections that can be rolled by the major units. But they cannot be rolled and supplied to the consumer at the same price as the major units can do. It is of the most vital importance, as we have stated, that steel, particularly this class of steel, should be sold as cheaply as possible to the consumer. It will not be in the national interest, therefore, to encourage the rolling of sections by these mills which can be more economically rolled and distributed by the major units. It is clear to us that there is no room at present in the country for so many mills simultaneously rolling these particular

and similar products until the demand for all classes of steel has increased by 200 to 300 per cent. We are also in no position to say how many and which of these mills should be kept going, for we have no authority or even information at our disposal to suggest which of them should be allowed to function and which of them should be closed down. This is a matter which the Government alone can deal with, unless it is settled by the interested parties by voluntary action. Until the report by the expert has been submitted to the Government and considered by them, even the Government will not be in a position to decide.

III—PROPOSALS FOR THE RE-ORGANISED INDUSTRY

27. In the meanwhile, we believe that there are good grounds for recommending that in a well organised steel industry there is a place for Re-rolling mills, provided they fulfil the conditions mentioned by us in our letter of the 5th October 1945 and reproduced in paragraph 24. The number of mills to be recognised should be limited by the demand for their products. In order to ensure economy every recognised mill should have a market large enough for it to be able to work at least two if not three shifts per day during at least five days in the week. They should not be concentrated in such a way as to cater more or less for the same area, but at the same time they should not be so few in number in relation to the demand that any internal competition eventually becomes impossible when a free supply of billets by the expansion of the primary producers becomes available. Their location and distance from the major works should be such as to enable them to take full advantage of the difference in freights especially in respect of those products, which may not or cannot be rolled by the major works.

28. *Supply of raw materials—SCRAP.*—For war purposes, it was perhaps necessary to arrange for a supply of scrap to some of the mills, involving much expenditure in its collection and distribution. This is no longer necessary and the scrap market must be left free for any small mills which may find it profitable to roll it and dispose of the products locally. Any re-rollable scrap produced by the major works or from any other source which may be ultimately controlled, will be sold at such prices as may be fixed by the Selling Organization in relation to the price of billets.

29. *Electric or other steel.*—If any mill considers itself in a position to make its own rollable steel by any process and sell it in competition against ordinary mild steel, it should be allowed to do so at its own risk. No special prices either for the steel or the products should be payable.

30. *Indigenous billets or other semis.*—So long as there is any shortage of these products some rationing of them may be necessary. We, accordingly, suggest that the supply of indigenous billets and semis shall be governed by the following considerations :—

- (i) In order to achieve the lowest costs no major works or other producing unit is expected to use in other than exceptional or particular circumstances any steel for rolling billets or other semis if any of their finishing Mills are thereby prevented from working to maximum capacity.
- (ii) Subject to this reservation, billets or semis when available should be supplied in the following order of priority :—
 - (a) Those units which were built before the war on an express or implied agreement or understanding that they would be provided with these materials by any of the existing Works, or when leased or controlled by such Works, the products rolled by the unit being sold as the property of such Works.

- (b) Those units which were started during the war and to the products of which protection is or may be granted by the Temporary Tariff Board.
- (c) Those of the reorganised units which by their situation in the interior have no economic alternate source of supply.
- (d) Those units which were established at the Ports and were operating before the war without any expectation that billets will be supplied by the local works and had built their business on imported material and at whose instance and for whose benefit imported billets were admitted free of duty.

31. *Prices of indigenous billets and other semis.*—All recognised mills should be supplied with these products at a uniform price f.o.r. the nearest works plus the freight to destination. No unit favourably located should be subsidised at the expense of other works more favourably situated by the supply of these products at a uniform price f.o.r. destination as was until recently the practice. The price of billets must be so fixed as to leave a reasonable margin of profit to the re-rollers.

32. *Supply of imported billets.*—If the demand for the products of those mills which are recognised as part of the Industry in accordance with our proposals cannot be met by the supply of indigenous billets, arrangements shall be made for importing such quantities of them as may be necessary from time to time. They should be imported from the most favourable sources and subject to the same procedure and conditions as those applicable to the imports of other classes of steel. No duties should be levied on these imports, but they may be reimposed if the prices of imported billets fall below the levels which make their reimposition, after an enquiry by a Tariff Board, desirable. The Selling Organisation should be the normal channel through which the imports should take place.

33. It is in the national interest to encourage the manufacture of specialised steel products. The price of billets and semis, whether indigenous or imported, should, if possible, be so fixed as to enable them to meet foreign competition. If this cannot be arranged it will always be open to the manufacturers to apply for an enquiry by the Tariff Board for the grant of protection.

34. We have so far confined our discussion to the Re-rolling Mills other than those which are now classified as A-1. Three of the Mills are operating under conditions which will enable them to secure their requirements from the Tata Iron and Steel Co. Ltd. The fourth mill is mainly interested in the manufacture of specialised products covered by paragraph 33.

IV—INTERIM PROPOSALS

35. Our recommendations are made on the assumption that the Re-rolling Industry will be reorganised in accordance with our suggestions and that thereafter it will have a recognised place in the organisation of the steel industry as a whole. But a considerable amount of time must elapse before any tangible results follow any scheme which may be prepared and brought into force for its reorganisation. In most cases re-equipment and even re-building on the same or other sites may be involved in addition to the provision of substantial finance. In the meanwhile, some reasonable solution should be found to the problem of allowing the necessary number of mills to function in order that there is no avoidable shortage in the country of such products as those for which there is a demand and these mills can roll.

36. The solution of the problem, however, should not be wholly at the expense of the consumer. The mills themselves must realise that what is

now sought to remedy was due entirely to their own management, lack of experience or of foresight. But for the war, many of them would have been unable to survive much less make the profits which they were able to earn. It would, therefore, not be unreasonable to expect that they in their turn should make some sacrifice to reap the benefit of it later. The consumer must be made to suffer as little as possible, whilst the mills are given an opportunity to put their house in order. The best way in which they can serve the consumer and themselves during the interval is by accepting the following conditions :—

- (1) Arrangements may be made for the supply to the mills of billets not exceeding 100,000 tons during the year following the acceptance of this scheme. If the billets cannot be supplied from local sources, such quantity as may be necessary may be imported to make up the quantity. In this case the price should be the average of the domestic and import prices per ton plus the freight from the nearest works to destination.

The billets should be distributed to the mills in proportion to their average production of rolled materials per year during the war. The scrap market should be left free for use by any mill whether it is included or not in the number to which billets are to be supplied.

In so far as any figures are available, the maximum production of these Mills was 75,000 tons in a year with raw materials from scrap, billets, and electric steel. The provision therefore of 100,000 tons of billets alone may be regarded as ample.

- (2) No special conversion rates, prices or particular markets should be claimable for the products of the mills which may be disposed of by them through the normal trade channels. It may be of advantage to them to use the Selling Organisation for this purpose, if one is formed.
- (3) The size of the billet shall not normally exceed 2½" unless for some special reason the Selling Organisation permits the supply of a larger size. The mills should be at liberty to make any product, irrespective of whether it is made by any of the major works.
- (4) No mill shall have the benefit of this temporary arrangement or be allowed to operate without previously obtaining a licence from the appropriate authority in the prescribed form. It should be one of the terms of this licence that it should be liable to cancellation on proof of any such practices as those mentioned by us in paragraph 218 (Sub-para. 6) of the First Report.
- (5) The arrangement should remain in force for one year and may be renewed after a review thereafter, unless in the meanwhile a scheme for the reorganisation of the Industry has been prepared and brought into operation.

37. We believe that if the recommendations made by us for the reorganisation, re-equipment and rationalisation of the Re-rolling Industry takes place in accordance with the conditions laid down by us, it will result in India possessing a first class subsidiary adjunct to the major units of production. We have at the same time given sufficient breathing time to the Re-rollers to take advantage of such expert assistance as was possible in the present difficult circumstances to provide and to take the necessary steps to improve their efficiency. In the interval, it will be realised that there has been no serious departure from the position in which the mills were before the war. In one

important respect at least they are better off. We have proposed arrangements for the supply to them of raw materials, which it is doubtful whether they would have been able to secure for themselves in the immediate future.

38. Before concluding this Chapter, we would urge upon the Government the desirability of giving due weight to the background we have fully described, against which we have had to make our proposals, when the Government come to consider them. We have set out the difficulties of the problem, which have been created by the origin, growth and history of the Re-rolling Industry. These difficulties have not been simplified by indiscriminate support of both efficient and inefficient units on the part of some well-meaning but inadequately informed sympathisers. The production and supply of the cheapest steel in all its forms, rather than the encouragement of unnecessary or inefficient units, is the main purpose of the expansion of the Steel Industry. That purpose cannot be achieved except by the adherence, whenever possible, to economic in preference to any other considerations.

CHAPTER II

THE SCOPE AND DEVELOPMENT OF THE ENGINEERING INDUSTRY

39. The purpose of this Chapter is to examine briefly the scope and development of that portion of the Engineering Industry in India which mainly processes iron and steel ; in other words it deals with an industry which is one of the principal consumers, without being the producer, of these basic raw materials.

40. The Engineering Industry covers commercial undertakings, Government and quasi-Government workshops. While all consume indigenous iron and steel we intend to confine our observations only to the existing and future Commercial Engineering Industry.

41. For reasons mentioned in the First Report industrial expansion generally in India has been small in extent and slow during the period between the last two World Wars. A market for mass-produced Engineering goods commonly used by the public was practically non-existent. Up to the outbreak of War in 1939 industrialisation was not sufficiently advanced to warrant the manufacture of specialised Engineering products which could more readily and cheaply be imported from more highly industrialised countries. Prior to the war the activities of the Engineering Industry were, therefore, predominantly of a general nature.

42. The Engineering Works are not evenly distributed over the Continent of India. Those engaged in the heavy industries are generally situated at places within easy range of coal and iron and steel supplies and where the proximity of allied industries provide such attractions as availability of labour and cheap power. The lighter Engineering Works have been attracted to the principal centres of industry as their markets are mainly to be found in the industrial towns.

43. Before the war the industry consisted of a hundred or more firms representing the principal undertakings other than those owned by Government. The activities of these firms were not confined, except in very few cases, to the production of special articles. The majority of them were engaged in four, five and sometimes even more different activities, e.g., Mechanical, Structural, Iron Foundry, Sheet Metal work, Light Forgings, etc. The largest number of firms were, and still are, engaged in Iron Foundry and Machine shop work. Taking the Industry as a whole the largest concentration of general Engineering Workshops is found in the Industrial districts of Bengal ; other smaller concentrations are to be found in Bombay, Bihar, Delhi and Sind.

44. It has taken some 25 years for the Industry to reach its present scope of activities and level of efficiency but it is only within the last few years that there have been definite signs of any specialisation in the production of Engineering goods, made from iron and steel. Apart from this class of production considerable progress has been made during the last 15 years in the Fabrication of bridge and structural work, rolling stock and Railway materials. During the war other Engineering Industries such as Ship-building, Steel Castings, Steel Drum Making, Bolt and Nut production, etc., have also made good progress and reached high levels of efficiency. The more important of these iron and steel consuming industries deserve special mention.

STRUCTURAL ENGINEERING

45. The inflated demands which temporarily followed World War I led to the establishment of a Structural Industry with capacities in excess of requirements to such an extent that its aggregate potential capacity is now little more than what it was 25 years ago.

46. Between 1929 and 1933 the total consumption of fabricated structural steel-work in India decreased by 50 per cent. This was due primarily to world conditions. The following extract from the Indian Tariff Board's Report of 1934 on the subject of fabricated steel-work is worth reproduction :—

“ We attach great importance, from the point of view of developing the steel industry, to the adoption of suitable measures calculated to increase the market for fabricated steel. No other form of protection can have the influence on this development that would be exercised by a definite scheme spread over a period of years for capital replacements and construction of railways and other productive public works. The credit of the Government of India in the capital market is exceptionally high and money is both plentiful and cheap. A bold policy of public loans for capital expenditure would at this junction afford enormous assistance in stimulating the market for capital goods like structural steel. We believe that the effect of such a policy would not be confined to the steel industry but would be felt in every aspect of the country's economic life.”

47. In 1934 the Railway Board Bridge Regirdering programme practically ceased and the industry operated at between one-half and one-third of its total capacity until towards the end of 1939.

48. After the outbreak of war the demands on the Industry increased until all fabricating shops were working to full capacity limited only by the difficulties in skilled and semi-skilled labour, transport and supplies of steel and other accessories.

49. Replies to a questionnaire issued by the Panel to the Structural Engineering Firms reveal that the potential output of their combined workshops on present day basis is over 1,25,000 tons per annum, excluding processing of galvanised corrugated sheets, fittings, rivets, bolts and nuts, rainwater goods, castings, etc. The amount of steel consumed by the Railways in their own workshops for bridge and structural maintenance purposes and also the amount of steel used by small mofussil workshops in the fabrication of simple structures to meet the requirements of small towns and villages is not readily ascertainable but taken together they must represent a considerable tonnage per annum.

50. Not all the firms producing structural steel-work specialise in bridge and/or structural work. The majority of the medium and smaller sized firms carry out only general engineering in their workshops. In other words, in the

same workshop, structural, mechanical and iron foundry work all go on at one and the same time, being processed in turn on the same machines. With the exception of some of the bigger structural workshops most of the shops are equipped with old and inefficient plant and in these workshops the standard of workmanship is naturally low.

51. The figure of 1,25,000 tons given in paragraph 49 above covers fabricated structural steel-work of all classes ; if high class fabrication only is considered, such as is required in Railway bridges, the maximum capacity available would not exceed about 40,000 tons per annum. In order that the progress in specialised structural fabrication can be appreciated it should be remembered that the first major Railway bridge to be made in this country was fabricated only twenty years ago. Since that time such engineering feats as the fabrication of several large Railway bridges, the Howrah Bridge and Admiralty Floating Docks have been undertaken and successfully completed. Upon these facts the industry justifiably claims that the quality of India's structural fabrication compares favourably with that of any other country in the world.

52. Geographically the Structural Industry has gravitated to the principal centres of industry, that is near the major Ports. On a production basis over 70 per cent. approximately of the Industry is established in Calcutta, Howrah, Dum Dum and Kumardhubi in Bengal ; nearly 15 per cent. is centred round Bombay and the balance in Karachi, Madras, the United Provinces, Bihar, Mysore, etc.

53. Replies to the Panel's questionnaire show that established structural Engineers are in most cases willing to extend their existing workshops in order to provide increased production as soon as the demand for bridge and/or other structural steel-work warrants it. A few of them have already decided to increase their present capacities in the near future and others have indicated that it is their intention to replace inefficient plant by modern and more efficient machinery and equipment.

54. It is important that the Central and Provincial Governments should hasten the completion of their post-war development plans and decide on a definite and bold programme of capital works involving the use of structural steelwork. Schemes to provide improvements to Road and Rail Transport facilities, Ports, Waterworks, Hydro-electric Projects, etc., will necessitate the construction of major bridges, wharves and warehouses, pipe lines, transmission towers, power houses, etc. for all of which considerable quantities of steel will be required. At the same time we recommend to the Industry the advisability of completely reorganising itself if it is to meet efficiently the demands which may be made upon it by the materialisation of such schemes as those mentioned above. It is suggested that old plant and machinery should be discarded and replaced by new and modern equipment. It may in some cases be necessary to arrange completely new works layouts.

SHIPBUILDING

55. Throughout the war all firms engaged in Shipbuilding and Ship-Repair work have been working to capacity. Developments of shipbuilding, particularly the building of hulls of ocean-going vessels, is under contemplation and, in fact, some headway has already been made in this direction. The Panel, however, is not aware of the extent to which this development will materialise. In any case, this is a subject which is receiving the attention of a special Panel, viz., the Shipbuilding and Marine Engineering. It is sufficient for us to say

t the Industry of shipbuilding and ship repairing in India will absorb a considerable quantity of iron and steel in the future and constitute an important part of the whole Engineering Industry.

RAILWAY WAGON BUILDING

56. The Wagon-building Industry consists mainly of commercial undertakings for fabrication of coaching underframes and construction of passenger coach bodies. Execution of running repairs to both passenger and goods stock being carried out by the Railways in their own Workshops. The Industry has been in existence for nearly thirty years during which time, apart from initial expansion after the war of 1914-18, there has been no opportunity for any significant increase in its capacity for the production of either broad or metre gauge wagons. Indeed for many years during this period the Industry had to cater for coaching underframes as well, to keep itself going.

57. In 1933, the potential capacity in terms of 4-wheelers was about 8,000 vehicles per annum. The Tariff Board Report of that year shows that it was then apparently the definite policy of the Railway Board to place all orders in India up to the full extent of the resources available. The expectation was not fulfilled. In fact, including imports, the total average demand from 1930 to 1939 was only 3,061 per annum reaching a peak of 6,261 in 1930 and falling as low as 970 in 1932, while even for the first two years of the war of 1939-45 the level was barely 2,000. Although temporary military needs resulted in subsequent requirements being greatly increased, the emergency was too sudden for the industry to do more than achieve the utmost utilisation of its existing facilities.

58. Today the proved capacity on the same basis is about 10,000 vehicles per annum, but as a result of the high rate of procurement in the last two years of the war of 1939-45, the current demand is much reduced. In fact, very few are actually wanted for the time being, though with the object of saving the industry from decay it has been indicated that endeavours will be made to cover out the estimated requirements for the next seven or eight years at an average of approximately 4,000 per annum. It is obvious, therefore, that only about 40 per cent. of the available resources will be absorbed for some time and that apart from the modernisation of obsolete equipment, there is no justification for recommending any expansion until the surplus capacity is absorbed. The prescribed life of a wagon is said to be 40 years. Until the total number in service is doubled and approaches 400,000 the prospect of such absorption is remote even allowing for the more active growth of the transport system.

59. The largest wagon works are situated on the borders of Bengal and Bihar, while other wagon builders are located in and around Calcutta. In addition to the actual Wagon Builders there are, of course, numerous firms with workshops in Bengal, the U. P., Punjab, Bombay which produce for these builders wagon components, e.g., forgings, vacuum brake gear, timber fittings, bolts, nuts, screws, rivets, springs, iron and steel castings, leather shields, etc.

60. According to the replies received from the Wagon Building Industry to the Panel's questionnaire the amount of steel which could be absorbed by the Industry on a full capacity basis would be in the region of about 80,000 tons of billets, sections, bars, plates, sheets, bolts, rivets, etc. In addition to this quantity a minimum of 25,000 tons of steel would be required for wheels and axles and nearly 10,000 tons of machined steel castings and over 1,000 tons of finished iron castings. The amount of steel absorbed per annum by the Railways and Ports in their own workshops for wagon maintenance is not known and is therefore not included in the above figures.

61. The Industry is also equipped with plant to produce large and small pressings, sheet metal work and heavy, medium and light forgings for G. S. Wagons. The output from the main workshops meets the demand for forgings, stampings, springs, etc. from the industry as well as from the Railways. Replies to the Panel's questionnaire show that improvements to the plant and equipment in the general wagon building shops will include the installation of up-to-date drop stamps, presses, furnaces and spring making plant, as well as other special purpose machines and the most modern heat treatment equipment. This modernisation of equipment in the main wagon shops will result in an increase in the manufacturing capacity both of components and complete vehicles by about 30 per cent. All the Wagon Building Firms have indicated in their replies to the Panel's questionnaire that they would be prepared to increase the capacity of their existing works as and when it is warranted by the demand.

IRON CASTINGS

62. Iron Castings are produced on a fairly wide scale throughout India but the main centres of production are in Bihar and Bengal in close proximity to the supplies of pig iron and coke. With the exception of the Kulti Foundries the Industry consists of a large number of small producers. Due to this circumstance and to the unorganised state of the Industry there are no figures available of the levels of production reached during the war year or of the capacity of the Iron Castings Industry to meet post-war demands. It can, however, confidently be assumed that the capacity of the Industry will be sufficient to cope with the demands for castings of the types similar to those produced in the pre war years. As India becomes industrialised more specialised types of iron casting as well as castings made to greater limits of accuracy will be required. When India develops her secondary industries there will be a demand for accurate castings to a uniform analysis, which the Industry at present is not equipped to manufacture. The small foundry cannot afford to employ the necessary technical staff to ensure uniformity, and it is likely that it will develop on lines similar to those in Europe where in many cases Engineering Firms purchase their iron castings from specialised producers. The establishment of mechanised foundries on these lines is now being undertaken and there is no doubt that they will fulfil a very useful purpose in enabling the lighter industries to obtain supplies of high quality iron castings at reasonable prices.

63. In recent years one or two firms have commenced the manufacture of high duty castings and it is understood that plans are being completed for an increase in the production capacity of these castings.

STEEL CASTINGS

64. Prior to September 1939 the Steel Castings Industry was centred in the Bengal Area with the exception of two or three small foundries situated in Bombay and Lahore. A small quantity of steel foundry work was carried out by the Railways in their workshops and Indian Ordnance Factories manufactured steel castings to suit service requirements. The principal manufacturers of steel castings were :

Burn & Co., Ltd., Howrah.

Bhartia Electric Steel Co., Calcutta (formerly Hukumchand Electric Steel Co.).

Kumardhubi Engineering Works Ltd., Kumardhubi.

Steel & General Mills, Lahore.

Mukand Iron & Steel Works, Lahore and Bombay.

65. During the war new steel foundries have been started in Calcutta, Cawnpore, Bombay and Mysore and although generally these have not been on a large scale there has been a considerable increase in the capacity of the industry.

66. Before the war the industry was subject to considerable competition from Continental castings which were dumped into this country at very low prices. The production of steel castings rose from 2,500 tons in 1936 to over 6,500 tons by 1944. The war years have enabled all foundries to work at production levels which have been limited only by supplies of coal, labour and transport. It is probable that the total present day capacity of finished castings now exceeds 10,000 tons per annum.

67. The greatest consumers of steel castings are the Railways, which consume over 60 per cent. of the industry's present total annual production in C. S. Axle Boxes, Buffer Castings and Plungers, Bogie and Bolster Castings, Drag Boxes, etc. The industry also supplies castings in fairly large quantities for the maintenance of the Steel, Cement, Sugar, Mining, Brick and other industries. Due, however, to the absence of secondary industries using steel castings the industry's function has been mainly on the maintenance side. As India becomes more industrialised there will be an increased demand over the present level for finished steel castings provided that adequate machining facilities are made available for finishing them to fine tolerances.

FORGINGS

68. The manufacture of Steel Forgings is spread widely throughout India but the units engaged on this work are small with one or two exceptions and the work is generally ancillary to some main line of production. There are a number of Engineering Firms in Bengal which produce drop stampings, which are chiefly supplied to the Railways and at present the capacity of these firms is not overtaxed. In addition to these commercial undertakings nearly all the Railways have their own workshops in which they produce forgings for maintenance and replacement purposes. The forging plant generally needs modernising and, in the case of one or two works, plans are already in hand for bringing the layout and equipment up-to-date. The capacity for making heavy forgings in India is limited to meet the demand for replacements and breakdowns. The plant required for efficient work is very expensive and it is doubtful whether initially there should be more than one or two well equipped units. With the production of locomotives, ships, marine engines, etc., the demand will increase, but if each of these industries is not to be burdened initially with high capital costs of modern forging equipment it seems worth while considering the establishment of a unit which could feed the various nascent industries. It must be remembered that heavy forgings involve heavy and expensive machine tools and unless these can be kept fully occupied the cost of production is likely to be excessive.

69. India being predominantly agricultural it is to be expected that there will be in future a demand for agricultural machinery and implements. If this demand is to be on any extensive scale, an increase in the existing drop stamp and forging plant and equipment will undoubtedly be warranted.

70. With the development of the various secondary industries there will be a demand for heavy and light steel pressings, iron and steel castings and steel forging of all types. As has previously been stated, the tendency hitherto has been for each industry to be self-contained as far as possible with the result that the capital burden of setting up Press Shops, Foundries and Forges has been

high. It is strongly recommended that future planning should discourage this tendency and should favour the establishment of a minimum number of modern units which could feed all other industries with, say, pressings or castings, and forgings. This concentration of specialised production will ultimately lead to cheaper production costs and a great saving in capital. It is the opinion of the Panel that the establishment under private enterprise of specialised production units should be encouraged ; they should have first call on any priorities issued by Government if large groups of secondary industries are to function efficiently.

CHAPTER III

DEVELOPMENT AND EXPANSION OF ALLOY, TOOL AND SPECIAL STEELS

71. We have been asked to examine the scope and development of the manufacture of Alloy, Tool and Special Steels as an integral part of our post-war development plan. Development of these categories of steel has taken place in the steel manufacturing countries of the world with the improvement and expansion in Engineering and Machine manufacturing industries. These require improved qualities of steel to sustain the stress, wear and tear imposed by conditions under which machines, tools and machinery made from such steels have to operate. Developed as a small scale industry in Sheffield, the home of high grade steel, the manufacturing processes and choice of raw materials have always been kept closely guarded secrets. This would have presented insuperable difficulty in the way of producing these categories of steel, but for the advance of metallurgical knowledge. The development of this industry, however, must depend on the large scale establishment of machine tool and machinery industry. The consumption of these special steels has been small and has in consequence been imported from abroad. The available data for ascertaining the imports are also inadequate and unreliable.

72. The user of tool steel is chiefly interested in the performance of tools made out of steel which will give the longest wear and tear. The chemical composition of special steels and their surface conditions are factors which essentially contribute towards their utilisation in the manufacture of special products, but the consumer is largely dependent upon the experience of the manufacturer, his equipment and reputation to produce steel uniform in quality and suitable for his purpose.

73. If the machine tool and machinery, manufacturing industries are to develop in this country on sound economic lines, the production of tool steels is an important step to be taken in the contemplated industrialisation of the country. In our opinion, the establishment of an efficient and integrated Alloy, Tool and Special Steels Industry is necessary for the following reasons:—

1. To meet the needs of India's growing industries such as the manufacture of automobiles, locomotives, aircraft, machine tools, etc.
2. To provide a higher level of self-sufficiency for India and to make her less dependent on foreign purchases of these expensive steels.
3. To provide a more extensive utilisation of indigenous and accessible steel alloying elements.
4. For armament purposes.

74. Prior to the outbreak of the war, India's steel Industry had confined itself almost entirely to the production of ordinary mild steels. The Ordnance Factories were however making certain qualities of alloy and tool steels such

as the high speed steels, nickel-chrome steels, etc., to meet their own requirements. A few steel plants owning electric arc furnaces had, to some extent, commenced the production of carbon steel castings and spring steel to Railway specifications.

75. During the pre-war period, there were about 23 agencies in Calcutta alone who were interested in the sale of imported alloy and tool steels. Out of these, about 18 represented English manufacturers, 4 Continental and one American. Some of the English and Continental firms had their own representatives stationed in Calcutta to give the technical service which is an important feature of the business. In addition to the 23 firms a number of hardware merchants imported high carbon steels of a cheaper variety.

76. It is very unfortunate that there are no reliable Government statistics or other data available on the pre-war imports of alloy, tool and special steels in this country. The Annual Statement of the Seaborne Trade published by the Government of India does not give reliable information. It is obvious from the figures of tool steel imports mentioned therein that the data suffers from insufficiently detailed classification and even incorporates what are obviously inaccurate figures. For instance, it is to be pointed out that the import of high speed steels during the years 1937-38 and 1938-39 has been indicated as 18 and 25 tons respectively from the U. K. and the share of Bengal is shown as 1 and 2 tons only in the two years referred to, whereas from knowledge of the trade, considerably more was imported. Estimates of the total consumption of the country of high speed steels was given to us by those engaged in the trade to be about 250 tons a year. The Annual Seaborne Trade Review does not give any idea of the consumption of high speed steel though the demand was almost exclusively met from imports. The data of imports of twist drills, files and such other small tools made from high carbon and alloy steels are very meagre, no quantities and proper classification being indicated. As a large amount of tool steels are utilised in the manufacture of these articles, the estimation of the country's total requirements of tool and alloy steels for the purpose would have been, in our opinion, facilitated, if reliable data of the imports were available.

77. In the absence of reliable statistical data, we adopt the following figures given by the Tata Iron & Steel Co., Ltd., showing the pre-war demand of the various alloy, tool and special steel bars as under :—

High speed tool steels	Tons
Alloy steels	250/300
Stainless steels	300/400
Hollow drill steels	100
Carbon tool steels	400 (approx.)
	1,500/2,000

78. It is also difficult for us to obtain the pre-war prices of tool and alloy steels but it is obvious considering the number of firms engaged in the business and the very limited volume involved, that there was very keen competition.

79. The English high speed steel manufacturers have their own association which fix the prices of high speed steels from time to time, depending upon the world market prices and other factors such as the price of alloying elements, etc.

80. The sudden outbreak of the hostilities in 1939 cut off the import of alloy and tool steels and with the mounting demands for alloy steel for armament production, the Government of India had to look into the possibilities of obtaining their requirements in the country itself. The manufacture of alloy, special and tool steels was therefore taken up at the instance of the Government, by the Tata Iron & Steel Co., Ltd., almost exclusively for war purposes. They

utilised the existing plant and equipment though it was not specifically designed for the purpose. It was supplemented by a 1½ ton high frequency furnace, two planing machines, two lathes, heat treatment furnaces and other ancillary equipment loaned or financed by the Government.

81. Similarly, the Mysore Iron & Steel Works, who were conducting research in the manufacture of various types of alloy steels for the last 12 to 15 years, particularly with reference to the manufacture of manganese, chromium and stainless steels, were forced to manufacture alloy steels including high speed tool steels for their own use and for that of other Government Departments.

82. As a result of this war-time necessity a very large variety of alloy, special and tool steels including special armament steels such as bullet proof steel, etc., have been produced and supplied against Government demands. The range of steels manufactured covers high speed steels, stainless steels, aircraft steels to EN specifications, Mit doe steels, etc.

83. It is particularly difficult to form any estimate of post-war demand of carbon steels, high speed tool steels, alloy steels, stainless steels, etc., but it must be obvious that with any increased industrialisation in the country the consumption of these special materials must increase above pre-war levels. We ourselves have not been able to secure any data on which to make an estimate of the present and the post-war demands of these Steels, but according to an estimate given to us by the Tata Iron & Steel Co., Ltd., the present and the post-war demands may be as shown in the following Table :—

Steel	Present demand	Post-war demand within five years or so
	Tons	Tons
High Speed Steels	250/300	300/350
Carbon Tool Steels	2,000/3,000	3,000/4,000
Alloy Steels	600/800	2,000/3,000
Drill Steels	400/500	1,000
Stainless Steels	100	200/300

84. With these figures as a basis it might be expected that for some time the figures of high speed tungsten steel would not increase appreciably as the modern tendency, unlike pre-war practice, is to use small quantities of high speed steel for tripping tools and tungsten carbide tipped tools and not solid tools. It is possible that a slight increase in tonnage of tungsten steels could be added to cover an increase in the indigenous manufacture of finished tools such as twist drills, milling cutters, etc., and a reasonable figure would be 300 to 350 tons of high speed steels per annum within the next five years.

85. In regard to carbon tool steels there would be a definite increase for general industrial purposes and this might conservatively be taken as between 3,000 to 4,000 tons per annum. In regard to the consumption of alloy machinery steels in the form of die blocks, pneumatic steels, etc., for machine tools, chemical plant, automobiles, cycles, etc., a figure of 2,000 to 3,000 tons per annum would not be over-optimistic. With increased prospecting for raw materials and for mining of increased quantities of indigenous minerals, the offtake of hollow drill steel might be expected to be in the region of 1,000 tons or so.

86. The uses of stainless steel will no doubt increase, particularly for decorative and luxury purposes and chiefly therefore in the form of polished sheet and strip. Some increase in bar form for cutlery purposes, surgical instruments, etc., might be visualised but the increased tonnage involved would not be very great. The consumption of a further 100 to 200 tons per annum might be a reasonable estimate for the next five years or so. Roughly therefore, the total demand for all classes of Special Steels within the next five years might be reasonably assessed as between 6,500 to 8,500 tons as indicated above.

87. We are of the opinion that the production of alloy, special and tool steels is a highly skilled operation and apart from the steel melting facilities it requires a large variety of specialised equipment such as ingot dressing equipment, forging presses, specially designed slow rolling mills, heat treatment furnaces, finishing, inspection equipment, etc., for the successful production of steels comparable to those of foreign manufacture. Besides the installation of these highly specialised equipment, employment of suitably qualified and experienced personnel of which only a small nucleus exists in the country at present, is also required.

88. In our opinion, it is therefore very essential that the manufacture of these special steels be concentrated in the plants of the primary producers, where besides the expensive equipment, laboratories, etc., a highly qualified staff of metallurgists is engaged only on this work. In expressing this opinion we do not wish it to be conveyed that a monopoly in the production of these special steels should be created and that no other manufacturer should take up their production if he has the necessary equipment and experience to do so.

89. We understand that having acquired considerable experience, the Tata Iron & Steel Co., Ltd., have made arrangements to set up a separate plant for the production of the tool and alloy steels including high speed steels and super high steels, carbon steels, alloy structural steels, machine steels of all types, die steels, stainless steels, spring steels, etc. We are also informed that this Company are negotiating a technical aid agreement with a firm of world renowned manufacturers in the United Kingdom of alloy, tool and special steels, for their proposed new plant.

90. The Mysore Iron & Steel Works have also proposed the manufacture of these categories of steel as they already possess the necessary electric and high frequency furnaces. So do some of the smaller manufacturers too. Considering the small quantity of such special steels that will be required in the immediate post-war period and the enormous expenditure involved in providing other specialised equipment besides the electric furnaces, we would suggest that these and other small works should proceed with caution with their projects. We have at the moment very little evidence even to express an opinion as to whether the production of these categories of steel should be restricted to one or two primary producers or should be generally permitted.

91. We feel, however, that in view of the relative limited demand and the highly specialised equipment and skilled personnel required, it is undesirable at the moment that small producers who have installed electric arc furnaces, as part of their present equipment for the manufacture of steel casting, should be encouraged to produce these specialised products requiring special equipment, technique and experience in their production.

92. The production of special alloy and tool steels requires the use of a large number of special alloying elements, the chief of which are aluminium, manganese, chromium, cobalt, nickel, molybdenum, tungsten, titanium and vanadium. Apart from the alloying elements the base metal itself should be of the highest quality. In the United Kingdom it was almost the standard practice to use

Swedish iron which is well known for its high purity, low sulphur and phosphorus contents. We are advised that in America the material used for this purpose is known as 'American wash metal'. As it may not be practicable to obtain these materials in this country, the tools steel manufacturers may have to obtain the base metal by synthetic production of a suitable composition in the electric arc furnace.

93. With regard to alloying elements, except for manganese, titanium, silicon and to a lesser extent vanadium and chromium, there are no occurrences of any importance in the country. While intensive efforts should be made by the Geological Survey of India for finding new deposits, yet under the present conditions, India will have to depend upon other countries for the supply of nickel, cobalt, molybdenum and tungsten although ferro-tungsten might be economically produced in the country from Burma and/or Chinese concentrates. The present output of tungsten concentrates from known small regular deposits in the country is totally inadequate.

94. With regard to vanadium, certain Indian magnetite ores contain about 1.5-2.5 per cent of vanadium pentoxide. Though this can be extracted in the country with the small quantity contained in the available ores, it is very probable that the cost of extraction would be much higher than that of imported ferro-vanadium. This would make the indigenous production expensive.

95. The existing import duties on ferro-alloys and non-ferrous metals which are essential for the manufacture of special alloy and tool steels are higher than those of imported finished steel bars containing the same materials. It will be appreciated that this acts as a handicap against indigenously produced special, alloy and tool steels, particularly in the case of steels containing a high proportion of alloying elements, e.g., high speed, heat resisting and stainless steels.

96. It is suggested therefore that import duties on ferro-alloys and non-ferrous metals required for the indigenous manufacture of alloy, special and tool steels should be reduced to such a level as will enable the special, alloy and tool steels of indigenous manufacture to compete on equal terms with imported special, alloy and tool steels.

CHAPTER IV

SUMMARY OF CONCLUSIONS

97. *Reorganisation of Rerolling Mills.*—The question of the Rerolling Mills did not form part of the original special Directive, but the following clause was subsequently added :

“ To consider the question of the place of the Rerolling Industry in the future and to make such recommendations as may be deemed necessary for the re-organisation and rationalisation of the Rerollers.”

98. We have traced the origin and growth of the Rerolling Industry which dates practically from the Tariff Board's Report of 1933-34. We are satisfied that there is nothing in this Report which establishes an unqualified claim on its part to a recognised place in the Steel Industry as a whole.

99. Our own investigations have shown that the industry as it operates at present has not been able to put forward a case which would justify its claim to be recognised as a useful contributor towards the expansion of the steel

industry. In order to do so it must take steps to put its house in order by fulfilling the following conditions which without being exhaustive are indispensable, viz. :—

(i) It must be organised on sound lines by elimination of those units the existence of which cannot be justified on reasonably economic grounds or which are in excess of the numbers required to meet adequately the demand for their products.

(ii) (a) It must be properly equipped, adequately financed and efficiently managed—efficiency being judged by the works costs and its utility, by the age and the nature of the plant.

(b) It should roll special products which are required in relatively small quantities for special purposes and which cannot be more economically produced and distributed by the bulk production units, having proper regard for the location of the markets to be served.

(iii) The basis price expected for these products should bear close relation to the basis price payable to a major unit of the same class for similar products and should conform to a list of extras for size and service.

100. It was arranged in April, 1945 that an expert was to be invited to visit India and to report on the re-equipment and re-organisation of the industry. The expert arrived in January, 1946. He has not been able to complete and submit his report and we are unable to make any proposals as to how and to what extent the industry needs re-equipment and re-organisation.

101. In the meanwhile we believe that there are grounds for recommending that in a well-organised industry there is a place for rerolling mills which fulfil the conditions mentioned in paragraph 99 and take such measures as may be found to be necessary to improve their efficiency.

102. We, therefore, limit our recommendations to the assistance which may be accorded to them on the assumption that they have taken the necessary steps to qualify themselves for receiving such assistance and have fulfilled the conditions set out in paragraph 99.

03 *Supply of Billets.*—After the Rerolling Mills have been reorganised and fulfilled the conditions mentioned in paragraph 99 the supply of billets to them should be governed by the following considerations, viz. :—

(i) In order to achieve the lowest costs no major works or other producing units is expected to use in other than exceptional or particular circumstances any steel for rolling billets or other semis of any of their finishing mills are thereby prevented from working to maximum capacity.

(ii) Billets or semis when available to be supplied in the following order of priority :—

(a) Those units which were built before the war on an express or implied agreement or understanding that they would be provided with those materials by any of the existing works, or when leased or controlled by such works, the products rolled by the unit being sold as the property of such works.

(b) Those units which were started during the war and to the products of which protection is or may be granted by the Temporary Tariff Board.

(c) Those of the reorganised units which by their situation in the interior have no economic alternate source of supply.

(d) Those units which were established at the ports and were operating before the war without any expectation that billets will be supplied

by the local works and had built their business on imported material and at whose instance and for whose benefit imported billets were admitted free of duty.

104. *Engineering Industries.*—The industrial expansion generally in India during the period between World Wars I and II has been small in extent and slow. It has not been sufficiently advanced to justify the manufacture of specialised engineering products from iron and steel which could more readily and cheaply be imported.

105. Prior to 1940 the Engineering Industry consisted of a hundred or more firms representing the principal undertakings other than those owned by Government. The activities of these firms were in most cases confined to general jobbing work rather than to specialised production.

106. A high standard of workmanship and efficiency has been reached during the past fifteen years in the case of a few of the secondary industries manufacturing iron and/or steel.

107. The inflated demands following World War I led to the establishment in India of a structural Fabricating Industry with a capacity in excess of requirements in subsequent years. For several years prior to the outbreak of World War II Structural Workshops operated at between 1/2 and 1/3rd of their full capacities due to lack of demand for structural steel work.

108. *Structural Engineering Industry.*—In order to maintain the Structural Industry in a healthy condition it is recommended that the Central and Provincial Governments should accelerate the execution of their Post-War Programmes for capital works which will absorb fabricated steel-work.

109. The Structural Fabricators generally expressed willingness to expand their existing capacities as soon as there are prospects of an increase in the demand for bridge and other structural steel work. It is, however, also recommended to the Industry that it should reorganise itself by improving works lay-outs and modernising its plant and equipment so as to be in a position efficiently to meet the future demands which may be made upon it.

110. *The Wagon Building Industry.*—The capacity of the Wagon Building Industry is considerably in excess of the anticipated demands for goods rolling stock during the next few years. There appears to be no justification in recommending any expansion in this industry until the surplus capacity has been absorbed. The industry has intimated that it is undertaking the modernisation of its equipment which will, besides increasing the efficiency of the fabricating units, increase the wagon building capacity.

111. *Iron Castings.*—The demand for accurate iron castings to a uniform analysis depends largely upon the development of India's secondary industries. The establishment of Mechanised Foundries is, however, being undertaken and plans are being completed for an increase in the production capacity of high duty iron castings. It is therefore anticipated that the Iron Castings Industry should be in a position to meet demands which may be made upon it as secondary industries develop.

112. *Steel Castings.*—The capacity of the Steel Castings Industry has increased by 50 per cent. since the beginning of World War. Two-thirds of its output is consumed by the Railways, but here again, any appreciable increase in demands for steel castings will depend to a large extent on the development of secondary industries. The provision of additional machining facilities must be made available for machining castings to fine limits when an increased demand materialises.

113. *Steel Forgings*.—It is considered that specialised forging units should be established to supply industrial units engaged in the production of locomotives, ships, marine engines, etc., as and when such industries come into being, in preference to the establishment of heavy forging equipment in the units actually producing such manufactures. Again, it is anticipated that there will be a future demand for Agricultural Machinery and should this evolve on an extensive scale an increase in the existing forging equipment will be warranted.

114. It is recommended with a view to avoiding an unduly high capital burden that in future planning the establishment of self-contained units in each industry be discouraged in favour of the establishment of a minimum number of modern units for the production of heavy and light steel pressings castings and forgings which would feed all other industries with these commodities. It is also considered that the establishment of these specialised production units under private enterprise should be encouraged.

115. *Alloy, Tool and Special Steels*.—The manufacture of Alloy, Tool and Special Steels has developed in other countries of the world with the growth of the Machine Tools and Machinery Manufacturing Industries. Hence the development of these categories of steel in this country would also depend on the simultaneous growth of the Machine Tool and Machinery manufacturing industries.

116. The consumption of these special steels in this country has been small and has in consequence been imported from abroad. The available data for ascertaining the imports are also inadequate and unreliable. It is, however, essential to develop the production of these special steels as a necessary requisite for the manufacture of machine tools and industrial machinery for the following reasons :—

- (a) to meet the needs of India's growing industries, such as the manufacture of automobiles, locomotives, aircraft, machine tools, etc. ;
- (b) to provide a higher level of self-sufficiency and to make India less dependent on foreign sources of supply ;
- (c) to provide an outlet for the utilisation of indigenus alloying elements ; and
- (d) for armament purposes.

117. On the outbreak of the war owing to the more or less complete cessation of import of these categories of steel and owing to their mounting demand for armament production, the manufacture of Alloy, Tool and Special Steels was taken up by the Tata Iron & Steel Co., Ltd. at the instance of the Government. As a result of this war time necessity a large variety of Alloy, Tool and Special Steels including high speed steels, stainless steels, aircraft steels to E. N. specification, bullet proof steel, drill steel, etc., were manufactured.

118. It is particularly difficult to form an estimate of the post-war demand for these steels. We ourselves have not been able to secure any data to make an estimate of the present and post-war demands of these steels. But according to an estimate given to us by the Tata Iron & Steel Co., Ltd., these demands for the various categories of special steels may be put down at anything between 6,000|8,500 tons per annum, of which we might require within the first five years about 350 tons of high speed steels, about 200|300 tons of stainless steels, about 2,000|3,000 tons of alloy steels about 3,000|4,000 tons of carbon tool steels and about 1,000 tons of drill steels,

119. We are of the opinion that the production of Alloy, Tool and Special Steels is a highly skilled operation and apart from the steel melting facilities, it requires a large variety of specialised equipment such as ingot dressing equipment, forging presses, specially designed slow rolling mills, heat treatment furnaces, finishing and inspection equipment, etc., besides highly qualified technical personnel.

120. In our opinion, therefore, it is very essential that the manufacture of these special steels be concentrated in the plants of the primary producers. In expressing this opinion we do not wish it to be conveyed that a monopoly in the manufacture of these special steels should be created and that no other manufacturer should take up their production if he has the necessary equipment and experience to do so.

121. In view of the fact that only a small quantity of such special steels will be required in the immediate post-war period and of the enormous expenditure involved in the specialised equipment required for the purpose, the production of these steels, in the smaller works should proceed with caution. We have very little evidence to express an opinion as to whether their production should be restricted to one or two primary producers or should be generally permitted. But we feel that it would be undesirable at the moment for the small procedure, having electric furnaces for the manufacture of steel castings, to take up the production of these specialised products.

122. In the production of the special steels such alloying elements as Aluminium, Manganese, Chromium, Cobalt, Nickel, Molybdenum, Tungsten, Titanium and Vanadium are required. Considering their small quantity, it may be necessary for us to import some of them from foreign countries. It is therefore suggested that with a view to encourage the development of these special steels as a preliminary step to establish the more important Machine Tool and Industrial Machinery Manufacturing industries in this country the import of these alloying elements should be allowed free of duty for this specific purpose.

1. P. P. Ginwala, *Chairman*.
2. J. J. Ghandy.
3. Frank Parr.
- *4. S. M. Bashir.
5. H. W. T. Hain.

* Subject to his note dated 31st August 1946. This note and the Chairman's note dated 19th September 1946 thereon are appended.

CALCUTTA ;
29th March 1946.

APPENDIX.

NOTE BY MR. S. M. BASHIR ON THE CHAPTER ON RE-ROLLING MILLS, PARAGRAPHS 6-34.

*Paragraph 6.**Sub-Para 1 :*

It was agreed in the meeting that wherever relationship of prices of Re-Rollers and Major Producers was to be shown, it would be expressed that "prices of Re-Rollers would bear close relationship to those of the Major Producers" instead of saying that the prices of Re-Rollers would be "substantially the same as those of the major producers". This change has not been introduced and the same expression "prices being substantially the same" has been kept.

Sub-Para. 2(b) :

The words "and/or" which had been specifically added between the words "urgent" and "small" have been omitted in this report. This omission makes a great difference and the words "and/or" should be added now.

Sub-Para. 7 :

If the re-rollers did not claim getting billets by cutting down the output of the Steel Companies' Finishing Mills, there was no specific claim for only importing billets either. The inference, therefore, is not correct.

Paragraph 8.

While it is true that it is only since the war that the Re-Rolling Industry has become organised and has made its claim vocal, individually Re-Rollers have from the very beginning always claimed and pressed for a recognised place in the Steel Industry of the future.

Paragraph 11.

It is not difficult to appreciate the fact that the Govt. could not ignore the interest of 75 Re-Rolling Mills who were not members of the Association. When the existence of the small man is ignored by big business, the Government is expected to protect the former.

Paragraph 12.

Industries are not put up for any philanthropic considerations. I do not therefore consider it reasonable to suggest that the motives which under war conditions stimulated the development of the re-rolling industry were any different from those which stimulated the general development of India in other spheres including development and extension at the Works of the main producers.

I consider that the Govt.'s official recognition of the existence of Re-Rolling Mills did not play any major part in the Re-Rollers' determination to secure for themselves a prominent place in the organisation of the steel industry. Re-Rollers in all other countries have had to struggle against the main producers' vested interests to have their claim recognised and re-rollers in India are similarly determined.

Paragraph 13.

Prices were based on the number of shifts worked, hence mills running lesser shifts were to get higher prices.

Paragraph 14.

The obvious principle adopted was the number of shifts worked. Perhaps it would have been better if those who fixed the rates were approached for giving the basis of or the method adopted by them in fixing prices. Instead of remaining in the dark, in my opinion, approaching, the authorities, who fixed prices for elucidation, was very necessary.

I pointed out in the Panel meeting that if the rates given to A-1 Re-Rollers were found reasonable the rates given to the A, B & C class of Mills could not be excessive. I repeat that if rates for A-1 class of mills bear comparison to 1933 rates of the Tariff Boards and the increase given when compared to big producers were not excessive, they cannot be excessive for A, B & C class of mills because costs go up as number of shifts goes down. It is admitted in the report itself in paragraph 21(3) that high costs and wastage were due to the mills not being able to work for the normal number of 15 to 17 shifts per week. If, therefore, the mills under war conditions could not be supplied with raw material and coal etc., to work the normal number of shifts, any criticism of higher prices having been paid to them is not justified, as their costs were naturally high.

Paragraph 17.

Arrangement for the supply of scrap and billets was made not only for the Re-Rollers but for the big producers as well and if the aggregate cost of the arrangement has been high in the case of Re-Rolling Mills, it has been high in the case of big producers as well, as will be shown later.

Paragraph 19.

In the approved draft no figures were worked out to show the loss on the sale of billets. All these figures, as appear now, are additions after the draft was finally approved.

Paragraph 20.

This paragraph except for the last sentence is a new addition.

Paragraphs 19, 20 and 21 seem to me to be an attempt to prove that the Govt. went very much out of their way to suffer a huge loss for the sake of Re-Rolling Mills. In the Panel meeting, I had mentioned that it was not fair to single out re-rollers and show the loss Government had suffered on their account, when according to the instances given by me the Government had suffered no less a loss in supplying billets and scrap to one of the main producers. I had also stated that prices, etc., could be briefly mentioned in the report as a historical narrative. I must, in all fairness to the interest to which I belong, place my point, of view.

While mentioning that arrangements were made by the Government for the supply of billets to fill the rolling capacity of Re-Rolling Mills to meet the war demand for steel, it must also be mentioned that arrangements were made by the Government to import ingots to fill the vacant rolling capacity at the major Steel producers' Works also. Nearly one hundred thousand tons of Ingots were so imported and supplied to the main producers at a little more than 1/3rd of the landed cost. Loss under this head alone would work out to nearly Rupees Sixty Lacs.

When the Government arranged for the supply of billets @ Rs. 150 per ton to the Re-Rollers, this was considered to be a reasonable rate. In my opinion, the Panel should have investigated the build-up of the retention price of the Indian billets also, to see how far profit allowed on Indian billets was reasonable.

It would appear only fair to add that the Government, at a considerable aggregate cost, adopted special measures to stimulate the production of steel of various kinds at the Works of the major producers, for example, a High Frequency Electric Furnace was supplied to the main producers at Government cost for producing steel. Any steps, therefore, taken by the Government which in fact helped the Re-Rollers to make a contribution to the development of steel production in war time, were not dissimilar from those which assisted the main producers.

On the question of prices paid to the re-rollers, it has been argued from the retention prices allowed to the major Works that the re-rollers were paid more than they deserved. I did not wish to introduce this argument as, in my opinion, it was absolutely unnecessary from the point of view of the report or even for the recommendations that the Panel was making for the re-rollers. Not being satisfied with the addition of a few more details, the sentence "this does not complete the picture" has been added.

I entirely agree that the above does not complete the picture and, therefore, must give a few instances of the other side to complete the picture, which are as follows :—

- (1) While Re-Rollers were brought under the Conversion Rate Scheme in 1942 for all their products, the main producers, except in the case of steel supplied at war contract rates, were free to fix their commercial rates as they liked until 1st July 1944 when the Government assumed the power to control their prices. It is not unknown that prices as high as two to two and half times the Control price were received by the major producers for tender lots for quite some time.
- (2) Till such time as the commercial prices, of the main producers were also controlled, viz., in 1944, the position of the conversion costs received was as follows :—

Main producers :

	Rs.
Commercial price for bars	224
Less price of billets	140
∴ Conversion cost per ton	84

The following scale of conversion costs is, therefore, interesting :—

	Upto November 1942	After November 1942
	Rs. A. P.	Rs. A. P.
Main Producers	84 0 0 per ton	84 0 0 per ton
Re-Rollers	45 0 0 ..	57 8 0 ..
' Re-Rollers	55 0 0 ..	70 0 0 ..
' Re-Rollers	75 0 0 ..	90 0 0 ..
' Re-Rollers	85 0 0 ..	100 0 0 ..

- (3) The price of defective of the main producers as per Scrap Control Order was Rs. 5 per ton less than the price of their perfect material whereas the difference between the perfect material and defective of the re-rollers was kept at Rs. 10 per ton.
- (4) Taking Rs. 220 as the price for the perfect material, the price for defectives given to the main producers was Rs. 215. Taking Rs. 150 per ton for billets and adding the conversion cost of Rs. 57-8-0 allowed to A-1 re-rollers, the retention price of perfect material of A-1 Re-rollers was Rs. 207-8-0 as against Rs. 215, the retention price for the main producers.
- (5) Schedule to the Scrap Control Order, Part I, Usable Defectives :

	Rs.
(1) Bars, Rods & Squares below 3" and flats, etc. ..	215 per ton.
Less price of billets	140 per ton.
∴ Conversion cost for defectives	75

The main producers thus got Rs. 75 per ton for converting good material (billets) into defectives, whereas the Re-rollers got Rs. 70 per ton to convert bad material (Re-Rolling Scrap) into perfect material.

The above would show what relationship the prices of Re-rollers bore to those of the main producers.

Contrary to what is mentioned in the last sentence of paragraph 20, I think it was very relevant to show what other sections of the Industry also were supplied with raw material at a great cost to the Government, when only the Re-Rolling Section has been shown to have derived such advantage.

Paragraph 21.

I do not think the Re-Rolling Mills have ever put forward their case resting substantially on the maintenance of war or similar conditions. This statement, therefore, is not correct.

Sub-Para (1) :

Raw material was supplied to furnaces of even the big producers. This particular advantage was received by all and not the Re-Rolling Mills only.

Sub-Para (2) :

On the question of conversion rates, the rates allowed to the re-rollers will not compare unfavourably if the average of war and commercial prices of big producers is taken.

Sub-Para (3) :

It is admitted in this para that on account of shortage of supply of billets, costs were high. If, therefore, higher rates were allowed commensurate with higher costs, no special favour was shown to the Re-rollers.

Sub-Para. (4) :

The cutting out of competition was no special feature for Re-Rollers only. Wherever Controls came in, competition was automatically cut out and this applied to big producers just as much as it did to the Re-Rollers.

In general, I must add that the re-rollers had little opportunity of putting their case before the general public before the war and when any members of the public were interested in the development of the steel industry in India, their interest did not extend further than the development of the primary producers. It is but natural that the primary producers should be established first and the secondary producers or re-rollers after them. In these circumstances, the fact that the public mind not being agitated by the position of the re-rollers before the war, does not in any way detract from the legitimacy of the re-rollers claim for recognition now.

Paragraph 23.

In line 5 instead of the word "organisation" which was in the final draft, the words "standards of efficiency" have been put in.

Paragraph 24.

I agree with the views put forward by the Steel Re-Rolling Mills' Association of India in their letter dated 25th September 1945 and cannot subscribe to the view that it was a disappointing document nor do I consider the arguments and claims put forward in any way extraordinary particularly when after the evidence, the Association gave information that was required on the lines suggested by the Panel.

Paragraph 25.

It is mentioned that the most important of the conditions was as regards the basis price and it is alleged that, "this has not been accepted". It was an easy matter to have found this out from the Chairman of the Association, who was always at Calcutta, instead of presuming and putting in the report that the price clause had not been accepted even after my pointing it out that it was not so.

With regard to prices, I have shown above that the Re-Rolling Mills have not enjoyed higher prices any more than the major producers have and have perhaps enjoyed less.

Paragraph 26.

It is mentioned that the basis on which the estimate of the billets is made is not understood. Many points were referred to again and again to other institutions for getting information and, therefore, it should not have been difficult to have found out from the Association the basis on which they had estimated the quantity of the billets required by them. Once the basis was found out, it was then for the Panel to express its opinion rather than omit finding out the basis and then putting in the report, "we are unable to say on what basis the estimate is made".

The Panel in part I of their report estimated that the demand of steel would be higher than what it has been. Therefore, there is no reason why the demand for all classes of steel should not increase so as to give the re-rollers an increased demand for their products.

Paragraph 30.

Sub-Para 1 :

I consider that at this time when a secondary steel producing industry, *i.e.*, the re-rolling industry, is specifically under expansion, the circumstances are sufficiently exceptional and particular in the general interest of the country to justify major steel Works being required to supply billets to the secondary industry, even if this does, to a certain extent, prevent their Finishing Mills from working to the maximum capacity.

The order of priority proposed needs further examination and can only be suggested at this stage provisionally, as the present suggestion may fix the *status quo* and may not allow for a departure being made even in the general interest of the country in particular or exceptional circumstances.

Paragraph 35.

The word "necessary" has been introduced instead of the words "17 mills which have not been closed down". This, I think, is a very big change and should not have been made.

Paragraph 36.

Sub-Para 1 :

After the words "to the mills", the words "excluding A-1 Re-Rollers" had been added. These have been omitted again.

Billets should be distributed according to the rated capacity for at least two shifts, otherwise rolling will be uneconomic and will conflict with the Panel's own views expressed in para 27.

The maximum production of the mills during the war remained on the lower side on account of shortage of coal and wagons, etc. In planned economy, there will be no such obstacles and, therefore, the restricted production of the past cannot be a basis for future otherwise production becomes uneconomic on account of high rolling costs.

Sub-Para 3 :

In the earlier draft, a sentence appeared about unfair competition as follows :—
"But in the absence of any unfair competition as defined by us in paragraph 217 of the First Report, clause 6, mills should not be allowed to claim protection against any major works."

The above sentence should be put back.

Paragraph 37.

The words "the recommendation made by us for" were deleted in the final draft. They appear again and they seem to be out of place and convey nothing.

Paragraph 38.

The development of a sound Re-Rolling Industry does not aim at the encouragement of unnecessary or inefficient units. The Re-Rollers agree that the production and supply in the forms required by the consuming public should be the main purpose of expansion of the Steel Industry. I would, therefore, like to point out that just as the reconsideration of cheap steel was not of paramount importance when Government decided to develop the major steel industry with the aid of bounties and protection, the same principle should be applied when the Re-Rolling Industry is passing through the same preliminary stages of development.

GENERAL

Great stress has been laid that the Re-Rollers must confine themselves to manufacturing Special products only. What was a Special product a decade ago, is no longer a Special product today and what may be today may not be in future. It is not unknown that the main producers have schemes to produce such sections as are Special today and are manufactured only by Re-Rollers. If, therefore, Re-Rollers are asked to confine their production to special products only and not produce such products as are manufactured by the main producers, then there should be a corresponding protection to the Re-Rollers that the main producers would confine their production to what they are producing today and will not start manufacturing the same products in future as are made by the Re-Rollers.

31st August, 1946.

S. M. BASHIR,

CHAIRMAN'S NOTE.

1. Mr. Bashir's note is dated the 31st of August, the day before he left for Europe, for three or four months. It was received by me in Calcutta on the 13th of September. The Report as submitted to the Government and approved by the rest of the Members for affixing their signatures had been in Mr. Bashir's hands for several weeks. It is rather a pity that Mr. Bashir should thus have delayed the printing of the report for such a long time.

2. I have carefully studied Mr. Bashir's note, and I find nothing in it which makes it necessary, as would normally have been the case, for me to convene a meeting of the Panel were it possible. A reference to my own records and to my copy of the draft Report discussed with Mr. Bashir and my other colleagues justifies me in making the statement that the draft as submitted to the Government corresponds with what was after prolonged examination and amendments approved by the Panel. Some verbal alterations, under the instructions of the Panel, had to be made to ensure grammatical or arithmetical accuracy before the Report was finally typed. In these circumstances I see no objection to the Note being appended to the Report as desired by Mr. Bashir, subject to a few observations I would like to make.

3. The Note is not one of dissent in the ordinary sense. No objection appears to have been taken to any proposal or recommendation of the Panel. It is substantially a plea on behalf of the Re-Rollers Association of which Mr. Bashir, as a Re-Roller himself, is a distinguished member, to show that some of the criticisms of the industry and the arguments in support of the Panel's proposals which though they have not been dissented from are not in accordance with his views as a Re-Roller. Mr. Bashir must judge for himself whether in the performance of an important public duty such considerations as these should have been given weight.

4. There are one or two points to which I would like to refer,

(1) *Paragraph 6.*—This paragraph has nothing to do with the Panel's own recommendations. A reference to paragraph 5 will show that paragraph 6 merely summarizes the inferences to be drawn from the passages, quoted earlier, from the Report of the Tariff Board.

(2) *Paragraph 19, 20 and 21.*—The purpose of these paragraphs was to show, (a) that Government had sustained heavy losses in subsidizing the mills in the past ; (b) that this course had been justified as a war measure ; and (c) that business on such lines could no longer be expected by the mills to be continued. This purpose was fully discussed by the Panel and accepted as relevant to our proposals. To illustrate the amount of loss sustained by the Government, the latest complete year, *viz.*, July 1944 to June 1945, for which figures were available, was selected and agreed to as convenient by the Panel. Whilst the draft was being discussed it was felt that, in order more fully to clarify the Panel's main argument it was desirable to obtain from the Iron and Steel Control more figures. These were obtained and incorporated into the respective paragraphs with necessary consequential changes in their structure. The revised paragraphs were approved a day or two later by such members of the Panel as were still in Calcutta and were authorized by the absent Members of whom Mr. Bashir was one, to put the final touches to the Panel's whole Report before its submission to the Government.

(3) The figures given by Mr. Bashir relating to the conversion costs even if their accuracy, which can be disputed, is presumed, are not relevant, as they deal with years not discussed by the Panel.

5. The Second Report which contains this Chapter could not be typed in time for the Members to affix their signature before they dispersed. It was agreed that after the typed copies were ready and supplied to the Members, the Secretary was to affix their signatures. With the exception of Mr. Bashir all the Members have allowed their signatures to be affixed in accordance with the arrangement.

6. I have found it necessary to follow the recognized convention that no use should be made of demi-official correspondence of a confidential nature not intended for publication in an official document and have accordingly, deleted one or two paragraphs which infringed this convention.

Calcutta, 19th September, 1946.

P. P. GINWALA,
Chairman,
 Iron & Steel (Major) Panel