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REPORT

OF THE

Indian Tariff Board

ON THE

GRANT OF PROTECTION TO THE PAPER AND [illegible] PULP INDUSTRIES

[illegible] OF PUBLICATIONS
1938

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DELHI: MANAGER OF PUBLICATIONS
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PRELIMINARY.

Terms of Reference.

The period of protection afforded to the Paper Industry for certain classes of paper by the Bamboo Paper Industry (Protection) Act of 1932 expires on the 31st March, 1939. The Government of India in their Resolution No. 202-T. (1)/36, dated the 11th December, 1937, have requested the Tariff Board to re-examine the question of the protection enjoyed by the Paper and Pulp industries and to report what protective measures (if any) should be continued after the 31st March, 1939. The terms of the Government of India Resolution are as follows:—

"The protection afforded to the Paper and Paper Pulp Industries by the Bamboo Paper Industry (Protection) Act, 1932, will determine on the 31st March, 1939. A subsidiary enquiry into the question of classification of paper for tariff purposes was held by the Tariff Board in 1935, and the action taken upon the Board's recommendations having resulted in a not inconsiderable extension of the range of protection previously enjoyed by the Indian paper making industry, the Government of India decided to review the necessity or desirability of maintaining the extra measure of protection which was fortuitously afforded by the imposition of the revenue surcharge of 25 per cent. in 1931. This matter has accordingly been enquired into departmentally, but, owing to the complicated nature of the data to be examined and in view of the imminence of this further enquiry by the Tariff Board into the whole question of protection to the Industry, the Government of India have taken no action in regard to the surcharge.

"2. The Tariff Board is now requested to re-examine the question of the protection enjoyed by the Paper and Paper Pulp Industries in India and to report what protective measure (if any) should be continued after the 31st March, 1939.

"3. If the Tariff Board is satisfied during the course of its investigations that the revenue surcharge on the paper protective duties is no longer justifiable it will be at liberty to make its recommendations in this behalf in advance of its main report.

"4. In making its recommendations the Tariff Board will take all relevant considerations into account including those stated in parts (*b*) and (*c*) of the Resolution adopted by the Legislative Assembly on the 16th February, 1923.

"5. Firms or persons interested in the paper making industry or in industries dependent on the use of paper who desire that their views should be considered by the Tariff Board should address their representations to the Secretary to the Board".

2. The Tariff Board entered upon its duties on December 13th, 1937, and issued a Press Communiqué in the terms of the Government of India Resolution calling upon all firms and persons interested to submit written representations not later than the 25th January, 1938. Two questionnaires were issued, one for manufacturers and the other for paper importers and traders and other persons interested in the industry. Copies of these questionnaires were sent to Provincial Governments, Chambers of Commerce and other associations likely to be interested and replies were asked for by 31st January, 1938. Extensions of the period within which replies should be submitted were given when requested and the Board continued to receive original or supplementary representations until April.

Questionnaires.

3. We started on tour on December 13th and after short visits to Bombay and Poona to inspect paper mills and gather some preliminary information, halted at Madras to receive any oral representations that might be offered and to hold discussions with the Provincial Government and Customs officials. We next proceeded to Calcutta, inspecting a paper mill on the way. In Calcutta and its neighbourhood we inspected the four most important mills at present manufacturing paper. We also recorded evidence from six paper mills, the Paper Makers' Association, the Paper Importers and Paper Traders' Associations and the Collector of Customs between February 2nd and 20th, and had the advantage of a discussion with the Provincial Government.

Tour programme.

From Calcutta we proceeded to Lucknow, where we inspected a mill and recorded evidence and also discussed certain matters with representatives of the Provincial Government. From Lucknow we visited Dehra Dun, inspected the Paper Section of the Forest Research Institute and recorded evidence from the officers concerned. Our next tour, after a short halt in Delhi, was to Kathiawar in connection with another enquiry, but the opportunity was taken to inspect a paper mill near Ahmedabad. Proceeding in turn to Bombay and Poona we completed our inspection and the record of evidence from witnesses not examined elsewhere.

4. The case for the continuance of protection for the Industry was presented partly by the Indian Paper Makers' Association to which most of the existing and new mills under construction belong, but mainly by individual mills who had their own special points of view put forward. We have to acknowledge the readiness of all concerned to put all the facts and figures which we required before us without reserve.

Presentation of case for protection.

In the enquiry of 1931 the continuance of protection was opposed by both the Paper Importers and Paper Traders' Associations. On this occasion the two Associations have stated that in present conditions they do not object in principle to the continuance of protection provided that the measure of protection is not excessive.

Chambers of Commerce and similar bodies have in general supported the claim.

5. We have found it advisable to adopt an arrangement of our Report somewhat different from that followed by the Tariff Board of 1931. Beginning with a preliminary survey of the progress made by the industry, we deal in succession with Raw Materials, Manufacture, Qualifications for protection, Measure of Protection and conclude with some supplementary proposals.

Arrangement of Report.

Unless otherwise stated, figures for raw material, pulp and paper should be taken to be on an 'air dry' basis, *i.e.*, containing 10 per cent. of moisture. The moisture content varies according to atmospheric conditions in different periods of the year and may be higher or lower than 10 per cent., which is the average figure adopted by previous Tariff Boards, and seems to us reasonable.

In referring the question of the continuance of protection to the Paper Industry to the Tariff Board, the Government of India stated that it was open to the Tariff Board to submit recommendations relating to the revenue surcharge on the protective duties in advance of its main report. We submitted our preliminary report on 31st March, 1938, but the decision of the Government of India had not been announced before the completion of our main report.

6. We desire to acknowledge the services rendered to us by our Secretary Rai Sahib H. C. Sen, whose long experience of Tariff Board enquiries has been of great value and of Mr. Amrit Lal Sahgal, B.A., LL.B., A.C.A., R.A., whose expert knowledge as a Chartered Accountant has facilitated the statistical part of our work.

Acknowledgment.

APPENDIX A.

Quantities of Auxiliary Materials used by Mills in 1936-37.

Auxiliary materials.	"A" Mill.		"B" Mill.		"C" & "D" Mills.		"E" Mill.		"F" Mill.	
	Indian.	Imported.	Indian.	Imported.	Indian.	Imported.	Indian.	Imported.	Indian.	Imported.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1. Sulphur	..	1,466·77	..	..	..	76	..	..	..	..
2. Magnesite	1,100·07	..	..	..	..	..	..	..	..	..
3. Soda Ash	..	..	..	..	..	..	..	6·5	..	2
4. Caustic Soda	..	..	..	1,002	..	1,791	..	28·9	..	87
5. Silicate of Soda	..	..	..	..	..	5	..	1·75	..	..
6. Sodium Sulphite	..	..	..	..	6	..	..	..	..	..
7. Hydrochloric Acid	..	..	..	..	17	..	..	..	..	..
8. Lime	..	..	3,787	..	7,768	..	..	..	679	..
9. Salt Cake	..	..	..	305	..	547	..	..	..	..
10. Salt	..	..	..	..	..	3,387	..	..	..	..
11. Sulphuric Acid	..	..	50	..	21	..	..	..	..	..
12. Bleaching Powder	..	1,197·40	..	954	..	94	..	24*	..	503
13. China Clay	..	..	1,290	..	2,340	..	..	105	151	..

* A certain quantity of Indian product is used.

Quantities of Auxiliary Materials used by Mills in 1936-37—contd.

Auxiliary materials.	"A" Mill.		"B" Mill.		"C" & "D" Mills.		"E" Mill.		"F" Mill.	
	Indian.	Imported.	Indian.	Imported.	Indian.	Imported.	Indian.	Imported.	Indian.	Imported.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
14. Paperine	..	..	..	..	..	8	..	..	..	..
15. Rosin	192·23	..	179	..	532	..	111·79	..	88	..
16. Alum Ferric . . .	..	..	731	..	1,272	..	..	..	426	..
17. Alum Sulphate . . .	..	..	..	16	..	..	..	152·66	..	..
18. Glue	..	..	..	..	8	..	..	..	..	..
19. Casein	..	..	..	..	11	..	..	..	..	1·54
20. Alkali	..	..	..	3	..	17	..	..	..	..
21. Bewoid size . . .	1	..	..	..	..	..	..	..	..	..
22. Starch	..	..	..	..	..	..	..	1·30	..	..
23. Gelatine	..	..	1	..	..	..	..	..	..	..
24. Potassium Ferrocynide .	..	..	..	..	·0027	..	..	..	..	..
25. Dyes	..	..	..	9	..	33·56	..	..	..	·75
26. Katni clay and ochres .	..	..	..	..	..	..	19·80	..	59	..
27. Sulphate of ammonia . .	331·09	..	..	..	..	..	..	..	..	..
28. Sodium Aluminate . .	..	..	..	·50	..	..	..	..	..	..

APPENDIX B.

Funds urgently required by the Paper Pulp Section of the Forest Research Institute.

	Approximate cost. Rs.
I. Machine and Plant—	
Kraft investigation.	
1. Bamboo crushing and feeding equipment . .	6,000
2. Jordan refiner	3,000
Mechanical pulp investigation.	
1. Pulp thickener and pocket feeding equipment .	3,500
Paper Machine equipment for above.	
1. One pair special press rolls	2,500
2. Rotary screen	4,000
Laboratory equipment.	
1. Testing apparatus (porosity, surface, etc.) .	1,500
2. Apparatus for air conditioned rooms . . .	3,500
II. If research on artificial silk is taken up, the following apparatus will be required immediately—	
Laboratory apparatus	3,000
III. Erection and fitting of above machines and supplying and fitting extra laboratory benches for new assistants	3,000
IV. Extension of existing laboratories for air conditioned testing room and laboratory for new assistants (including gas, water and light connections) .	10,000
Total Rs. . .	40,000

Estimate of proposed extra expenditure for the Paper Pulp Section of the Forest Research Institute.

	Rs.
I. One Assistant for Mechanical pulp at Rs. 200 per mensem	2,400
One Assistant for kraft at Rs. 200 per mensem .	2,400
One Assistant for bamboo and general work at Rs. 200 per mensem	2,400
One record and Store keeper at Rs. 50 per mensem	600
4 khalassies at Rs. 12 per mensem	576
One fitter at Rs. 40 per mensem	480
Chemicals, apparatus, etc.	500
Travelling allowances	1,000

	Rs.
Extra expenses on coal, water, electric current, etc.	500
Contingencies	144
Total Rs. . .	11,000

II. If research on cellulose and artificial silk is taken up the following extra funds will be required:—

One Assistant on Rs. 200 per mensem	2,400
One khalassi on Rs. 12 per mensem	144
Chemicals, apparatus, etc.	456
Total Rs. .	3,000

APPENDIX C.

Description of the process of manufacture of paper and pulp as practised in Madras.

The methods of manufacture followed at Amanjikarai are crude. Packing boards for the bookbinders and rough sheets of paper for use in Elementary schools for copy writing are produced. The raw material is wastepaper which is soaked in water in large brick tanks and allowed to soak for a day or two. When the material is sufficiently soft it is removed from the tanks and laid on the ground in a heap so as to allow water to drain off. Then the operator tramples on the heap with his legs until the mass becomes homogenous and soft like pulp. The pulp is then taken to pits in the floor of the paper making room where the lumps are thoroughly mixed with water and agitated with a bamboo stick. The frame on which the sheet is made consists of gauge of brass wire tied to a frame of bamboo sticks and over this another bamboo stick frame is placed. Holding the frame with both his hands the paper maker dips the sieve into the vat containing the paper pulp and lifts it as quickly as possible removing with the sieve some pulp and water. The water drains itself off as the sieve is lifted and placed on the vat with a stick underneath the sieve and over the vat in order to prevent the sieve from falling into the latter. The paper maker also presses the water out by placing a thick and rough cloth over the sheet and rolling over it a stick in order to enable the water to drain quicker. The whole mould is then inverted with the sheet on so that the rough cloth will be bottom most and then the sheet over it, then the wire gauze and finally the frame. The frame is removed and then the wire gauze leaving the cloth and the sheet over the pile of sheets made previously. When all these sheets are ready they are taken to a press and the water inside is slowly pressed out. As the pressure is released, each sheet is removed and left to dry in the open sun. When the sheet is dry, a brush is taken and thick conjee from boiled rice is smeared over the sheet and passed through a set of two rollers working under pressure. The second side is then smeared similarly with conjee and again passed through the rollers and then finally dried. The paper makers at Amanjikarai have also a cutting machine of crude design and the edges of the sheet are cut to the size required. The paper is then ready for the market.

2. The method of converting waste paper into pulp as followed at Amanjikarai is crude and one of the needs is to devise a cheap method of converting the wet and soaked wastepaper into pulp in a form of pug mill. As regards the raw material, proper sorting of the paper should be provided for. The wastepapers that are at present used are of various kinds and of different colours, and as these are not sorted, the resulting colour of the pulp is a dirty ash grey and it does not take any colour. If the cuttings could be sorted and the colours separated, each coloured waste could be manufactured into sheets of different colours and better prices would be realised. If a pug mill was introduced the resultant pulp would be more homogenous and the texture of the paper would therefore be better. Another defect in the manufacture is in the mixing of the pulp before the sheet is made. As the bamboo sticks in use do not give a uniform consistency, the sheets vary in thickness whilst a single sheet is often of different thicknesses. This difficulty could perhaps be overcome by designing a suitable paddle wheel for fixing at the bottom of the vat. Another defect is in the method of adding water and pulp to the vat whilst making the sheets. As every sheet is taken out, some quantity of pulp is removed from the vat along with the water that is in the sheet. One feature of the work at Amanjikarai is that the sheets are passed through rollers whereas in some hand paper making centres in other parts of India the polishing is done by rubbing the paper surface with a stone. The set of rollers in use is not, however, sufficiently strong and heavy to permit of a good polish being given to the paper. If the rollers were increased to five in number, the polish would be better provided that the quality of the pulp was improved and uniformly beaten or milled and ground into a uniform paste.

APPENDIX D.

Cost of making 9 reams of local handmade paper (size 17" × 27") containing 40 per cent. hemp and 60 per cent. wastepaper.

Item No.	Particulars.	Rs.	A.	P.
1.	Cost of 120 lbs. hemp	5	0	0
2.	Cost of 120 lbs. waste paper including cart hire	2	8	0
3.	Dusting and storing of raw material . .	1	0	0
4.	Caustic soda 2 per cent. on wastepaper and 5 per cent. on hemp	2	4	0
5.	Fire wood for boiling hemp with caustic soda .	2	0	0
6.	Washing out caustic soda from hemp and wastepaper	0	4	0
7.	Pulping charges for hemp	8	0	0
8.	Pulping charges for wastepaper . . .	3	8	0
9.	Bleaching and washing charges . . .	4	0	0
10.	Paper making, *i.e.*, vatman's wages . .	13	8	0
11.	Paper drying	1	4	0
12.	Rosin, soap and alum sizing	1	0	0
13.	Starching	3	12	0
14.	Glazing, cutting and packing	5	0	0
15.	Cart hire and sales expenses	1	0	0
	Total cost of production .	54	0	0

or O.S. Rs. 6 per ream.

The selling price of paper is from Rs. 6 to 7 per ream.

(All figures given are in Hyderabad Government currency and may be converted into British Indian Rupees by multiplying them 6/7.)

MGIPC—L—94STB—30 8-38—1,000.