The Paper Industry
Its Present Position and Prospects

There are at present 16 paper mills in India with a potential capacity of producing just over 100,000 tons of writing, printing and wrapping papers and boards.

There are about 9 major Boards and Straw Boards Mills. Among the paper mills, Rohtas Industries Ltd., Orient Paper Mills Ltd., Upper India Couper Paper Mills Ltd., and Gujarat Paper Mills Ltd., are also manufacturers of Board. The total production capacity of these is over 50,000 tons.

The names of the 16 paper mills and the main Board mills are given below:

**PAPER MILLS**
7. Andhra Paper Mills Ltd., Rajahmundry, Madras (1925?).

**BOARD MILLS**
1. Straw Board Manufacturing Co. Ltd., Saharanpur, U.P.
2. Straw Products Ltd., Bhopal.
5. India Paper and Board Mills Ltd., Calcutta, Bengal.

Hand-made paper has been made in India for centuries. The first mill for machine-made paper was established in Bally near Calcutta in 1870. Although this Company went into liquidation in 1905, the possibilities of the paper industry were fully demonstrated, and the lead was followed by more hardy successors.

But production has never overtaken demand. The following production figures from 1914 onwards give a rough idea of the progress of the industry.

<table>
<thead>
<tr>
<th>Year</th>
<th>in Tons</th>
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<tbody>
<tr>
<td>1914</td>
<td>13,000</td>
</tr>
<tr>
<td>1916</td>
<td>31,000</td>
</tr>
<tr>
<td>1925</td>
<td>28,000</td>
</tr>
<tr>
<td>1929</td>
<td>38,222</td>
</tr>
<tr>
<td>1932</td>
<td>40,555</td>
</tr>
<tr>
<td>1934</td>
<td>43,650</td>
</tr>
<tr>
<td>1939</td>
<td>59,198</td>
</tr>
<tr>
<td>1944</td>
<td>1,05,883</td>
</tr>
<tr>
<td>1945</td>
<td>1,05,000</td>
</tr>
<tr>
<td>1947</td>
<td>93,000</td>
</tr>
<tr>
<td>1948</td>
<td>97,765</td>
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During World War I, the paper industry suffered from the curtailment of imports of wood pulp. On the other hand, immediately after that war large foreign paper imports were dumped on the market. The paper industry could neither take advantage of the shortage of paper supplies during 1914-18 nor could it withstand the onslaught of dumping in the post-war period by foreign interests. The industry clearly stood in need of support on the Governmental level. The Indian Paper Pulp Co., which came into existence during the war took the initiative in applying for protective duties on imported paper. And the Government responded by asking the Tariff Board to enquire into the matter.

From 1924-25 onwards, the year of the first enquiry, the Tariff Board has conducted enquiries on the Paper Industry every seven years. The protection granted to printing and writing paper by the Bamboo Paper Industry (Protection) Act of 1925 certainly led to increased indigenous production. But the most outstanding landmark in the history of the Paper Industry was the protective duty of Rs. 45 per ton imposed on imported pulp by the Bamboo Paper Industry (Protection) Act of 1932.

With the protective duty on imported pulp, the Indian Paper industry came into its own. As the effects of this duty made themselves felt, the reliance on imported pulp was recognised as a very unsatisfactory element in the situation. A tropical country like India with large reserves of luxuriant vegetation should not have to depend on external sources for the production of paper, which is nothing but a thin felted material formed from macerated vegetable fibre. The forests of Assam, the Central Provinces, the Himalayas and the Western Ghats are rich in material for the manufacture of paper. It is to the credit of India that her
research on bamboo has proved its fitness for the production of pulp. There are various other sources in the forests of India which will serve just as well as bamboo.

Wholehearted support and stimulation of the paper industry by the Tariff Board would have, long before World War II, made India one of the largest manufacturers of paper in Asia. The phenomenal expansion of the sugar industry and the emergence of India as one of the most important sugar-producing countries in the world in the thirties should have suggested ideas to the Tariff Board. But the policy of "gradualness" vitiated the Tariff Board's attitude and the Industry has toddled all these years from childhood to adolescence in a perpetually undernourished condition. As with sugar, so with paper, India should have been in a position during the Second World War to meet her own requirements fully and to meet the requirements of the Middle East and South East Asia. Where the fortunes of an industry are so much in the hands of Tariff Boards, the responsibility for making the country at least self-sufficient is in the Board's hands. And we cannot but lay the blame for the unsatisfactory state of the industry at the door of the Tariff Board.

The present paper requirements of the country can be estimated at about 200,000 tons. As the present production capacity is only about 100,000 tons, there is ample scope for expansion. With regard to board and straw-board, we are fairly self-sufficient. As for newsprint, India does not produce any, but our requirements run to about 50,000 tons a year.

Sabai grass and bamboo are the two main raw materials used in India. Sabai grass grows in abundance along the sub-Himalayan belt of the country from the Punjab to Assam. Bamboo is available in large quantities all over the country, and the fact that the rotation of the bamboo crop is of four to five years gives to bamboo an advantage over the spruce and pine which are the alternative sources.

"India's linseed crops furnish 20 lakh tons of linseed straw every year. The sugar industry produces more than 3 lakh tons of bagasse for which the only use at present is as fuel. Kans growing wild over vast tracts of uncultivated land is regarded as a menace but is a potential raw material for the paper industry."—Dr. S. S. Bhatnagar.

It is calculated that 2.5 tons of bamboo are required to produce one ton of paper. To produce therefore India's full requirements of paper from this source alone is very easy.

The Panel on Paper which the Government of India appointed in 1945 has recommended that experiments should be conducted to grow other grasses and wood suitable for making pulp on a commercial scale.

As for wood pulp, abundant supplies of spruce, fir and pine are available all along the North Himalayan region. Tehri Garhwal, Kashmir, Darjeeling and Nepal are centres where pulp mills may be set up. In the near future, when newsprint mills and rayon factories are likely to engage the attention of Indian industrialists, manufacture of pulp on a very large scale will have to be undertaken.

Cotton waste, waste paper, rags, hemp and reeds and a host of other well-known sources of paper are also available in large quantities. In view of the abundance and the universality of the raw materials for making paper and board of all sorts, it is a supererogatory task to set up fresh Commissions and appoint special officers for a survey of the materials, as the Panel recommends.

The total world production of newsprint in 1948 was about 7½ million tons. Sixty per cent of this was produced by Canada and Newfoundland. India does not produce any newsprint but she consumes about 50,000 tons. It is probable that there will be a sharp rise in the consumption figures of India in the coming years.

There is at present under construction one Newsprint Mill in Chanda in the Central Provinces. The sponsors of the scheme have been able to enlist the active support of the Provincial Government, which has a reputation of taking a direct and active interest in the industrialisation of the Province. In spite of very active propaganda and profuse, if almost unwisely extravagant, expenditure on publicity, the management has been unable to raise much capital from the public. The Provincial Government has latterly appointed a Senior Government Officer as Manager of the Company, thereby reassuring the investors about the safety of their capital. The potential capacity of the mill is 20,000 tons a year. Production is expected to start in another year.

Three newsprint mills of like capacity, one in or near Tehri Garhwal, one near Dareeling, and a third near the forest areas of the Western Ghats within a reasonable distance of Bombay should be immediately set up and they would meet the requirements of India for the next few years.

To stimulate enterprise in this
direction the Government should give all possible help.

Since more than half the World's population is still illiterate and literacy is the largest single factor governing the demand for paper, the scope for the expansion of the paper industry should be unlimited. With the attainment of Independence, India is making a big drive towards full literacy. The adoption of Hindi as the national language, the increase in the number of Universities, the facilities for universal primary education—all these will accelerate the demand for paper.

But paper is something more than a medium of communication. The last war brought out its importance as munition of war. Its value as a strategic material is on a par with steel, cement, and chemicals. In the last war "paper cups and tumblers, lighter in weight, hygienically better and economically cheaper, replaced the traditional glass and metal utensils. Paper bags replaced jute and hessian bags for the packing of a number of commodities and paper containers for packing food, medicine and cosmetics were used to save steel. Paper was also employed in numerous other ways, for example, impregnated with resins or waxes for high insulation and laminates." (Bhatnagar).

The per capita consumption of paper in India is only 1 lb. per year, while in the United Kingdom it is 154 lbs., in Canada 174 lbs. and in the United States of America 350 lbs. The next twenty-five years in this country will see an unprecedented rate of consumption of paper. A comparison with the England of the eighteen nineties is irresistible. The Education Act of 1870 in England bore its harvest in the vise and popularity of the modern English Newspaper. With the spread of literacy in this country, the cheap modern newspaper with its mammoth circulation will soon make its appearance. Also, as in Russia, text-books and popular literature will be published in editions which run into millions of copies.

In view of the above, the following measures need immediate implementation in order to assist the development of the industry:

1. The import of baled newspaper as cheap wrapping paper should be entirely stopped. The following table gives the quantity and value of such imports during the four pre-war years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity in tons.</th>
<th>Value in Rs.</th>
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<tbody>
<tr>
<td>1935-36</td>
<td>57,583</td>
<td>41,60,000</td>
</tr>
<tr>
<td>1936-37</td>
<td>64,730</td>
<td>38,80,000</td>
</tr>
<tr>
<td>1937-38</td>
<td>48,809</td>
<td>47,40,000</td>
</tr>
<tr>
<td>1938-39</td>
<td>47,383</td>
<td>38,50,000</td>
</tr>
</tbody>
</table>

Thus India spent a crore and a half rupees in importing old newspapers. If that sum had been spent, in those days when machinery and personnel were cheap, to set up newsprint or
paper mills, the country would have reaped a rich harvest.

2. The Government should directly or indirectly help in the setting up of at least three newsprint mills excluding the present one under construction.

The doubling of production of the paper mills should be the immediate target; and all possible aids, as tariff protection, transport facilities, raw materials and chemicals procurements etc., should be made available to the industry to attract capital.

3. Pulp mills should be established in regions where pine, fir and spruce, bamboo and bagasse, cotton waste and linseed straw and other raw materials are available in plenty. This will reduce the heavy haulage charges and high prices of raw materials, which the majority of the mills has now to pay. Pulp mill companies should be set up with Government aid, if private capital is not forthcoming.

4. As Dr. S. S. Bhatnagar, F.R.S., Director of Scientific and Industrial Research has often pointed out, the paper industry should immediately set up a paper Research Association. Dr. Bhatnagar has already helped to bring into existence other such associations. The Cellulose and Paper section of the Forest Research Institute in Dehra Dun has done good work in investigating the possibilities of utilisation of various indigenous fibres and fibrous material for the production of paper, boards and kraft. But as the industry develops, various other problems will have to be tackled, which would be beyond the limited capacity of the Forest Research Institute. The disposal of waste effluents is such a problem. The use of sulphite liquor as a source of lignin and yeast is a research problem worth investigating which may lead to great commercial advantage.