

The presence of these different combinations in one mill makes it difficult to separate many of the statistics relating to the manufacture of pulp, basic paper and converted paper products. All converting operations carried on in paper mills in this industry are attributed to the particular industrial group of converting plants to which they properly belong. Including manufacturing operations as far as the basic paper-making stage there were altogether 125 mills in operation in 1955—the same number as in 1954. The employees numbered 62,205 and their salaries and wages amounted to \$265,298,119, as against \$252,598,383 the previous year. If the pulp made for their own use in combined pulp and paper mills is disregarded the total value of materials and supplies used in the industry as a whole can be considered as amounting to \$546,079,192 in 1955, \$515,257,595 in 1954 and \$499,350,994 in 1953; the gross value of production as \$1,326,938,138 in 1955, \$1,241,558,451 in 1954 and \$1,179,665,443 in 1953 and net valuation of production \$689,818,173 in 1955, \$641,517,070 in 1954 and \$599,934,934 in 1953.

The pulp and paper industry is one of the leading single manufacturing industries in Canada. In 1955 as in 1954 it was first in net value of production, in gross value of production, in employment and in salaries and wages paid. The manufacturing stages only of the industry are considered in these comparisons, no allowance being made for capital invested, men employed, wages paid or primary products sold in connection with the woods operations. These form an important part of the industry as a whole but cannot be separated from woods operations carried on in connection with sawmills and other industries. In world trade, pulp and paper are generally Canada's main commodities—newsprint alone, over a considerable period, has brought Canada more export dollars than wheat, nickel or any other single commodity.* The United States market absorbs annually over 83 p.c. of all pulpwood exports and over 84 p.c. of the pulp and the paper shipments of Canada. About 50 p.c. of the paper consumed in the United States is either of Canadian manufacture or is made from wood or pulp imported from Canada.

THE PULP AND PAPER RESEARCH INSTITUTE OF CANADA†

The Pulp and Paper Research Institute of Canada is a centre of research and learning, concerned with virtually every aspect of the production and use of pulp and paper products and with the training of McGill postgraduate students in fundamental research fields of interest to the pulp and paper industry. The Institute staff carries out applied research in the fields of woodlands operations and pulp and paper mill operations, and fundamental research in support of these fields; the graduate students work towards master's and doctorate degrees in physical chemistry, wood chemistry, chemical and mechanical engineering.

Facilities, therefore, include laboratories for pulp and paper testing and for chemical, physical, radio-chemical, chemical engineering and mechanical engineering research including hydraulics; a pilot plant for chemical pulping, pulp and chip refining, and waste liquor pyrolysis; a library on pulp and paper and related subjects; photographic and microscopic services; and a woodlands research department. At present the Institute has a permanent staff of about 160.

Established in 1913 as a branch of the Dominion Forest Products Laboratories, the Institute was re-organized in 1927 under the joint sponsorship of the Canadian Pulp and Paper Association, the Federal Government, and McGill University. Since then the Institute has occupied a building erected by the pulp and paper industry, but an additional building of modern design is being constructed at Pointe Claire on the western outskirts of Montreal by the Government of Canada in lieu of its annual financial grants. It will cost \$2,225,000 and will house Institute staff and facilities at present scattered about the McGill campus in temporary quarters. One wing of the building will contain laboratories typical of a college chemistry building, another will provide laboratories for engineering research, and a third will provide for administrative offices.

* For reasons given in Section I, Part II of the Foreign Trade Chapter, gold is excluded from Canadian trade statistics.

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