

Cover illustration shows a night view of blast furnaces in operation at Dofasco's steel-making complex in Hamilton, Ontario where the pictures on pages 3 and 5 were also taken.

Canada Today



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'Canada Today'
Published by:
The Counsellor (Press),
Canadian High Commission,
Canada House,
Trafalgar Square,
London SW1Y 5BJ

IF YOU MOVE — please advise by mail at the above address.

Editor: Jenny Pearson
Design: Dennis Fairey, F.R.S.A. N.D.D.
Production: Osborne BC Public Relations
Printed in England by:
J. E. C. Potter & Son Ltd., Stamford

Industry:

Steel thrives on new technologies

By J. M. Greene

By international standards, the Canadian steel industry is small, ranking twelfth in the world and producing approximately 1.9 per cent of the total world output. However, it has an above-average growth rate of 7 per cent per annum, compared with the world average of just over 6 per cent. Capacity figures estimated for this year are 16.9 million short tons; by 1980, if the present growth rate is maintained, it should be 24 million short tons.

The Canadian industry has been in the forefront in some of the newest steelmaking technologies. It operates at 90 per cent capacity, which is high by international standards, and is competitive in price when competing on an equal basis.

It has come a long way in a short time. In the 1940s, it was almost non-existent: peak annual production amounted to about one million tons. From then on, demand at home and abroad encouraged rapid growth. Large iron ore mines were opened up. Smelting and milling were developed using a variety of new techniques and the list of products obtained from steel ingots grew steadily.

In the sixties development became explosive. Production capacity more than tripled between 1962 and 1972, with technical advances in almost every stage of operation. The industry has also formed an efficient system for marketing and distribution, which in a country as widely-spread as Canada is a considerable feat.

To describe the Canadian steel industry as stretching from coast to coast is a slight exaggeration, but in a broad sense true. From east to west, there is Newfoundland Steel at St. John's and the Sydney Steel Corporation (Sysco) on Cape Breton Island, owned by the Nova Scotia Government. On the west coast is Western Canada Steel (Cominco), based in British Columbia. With a few exceptions, steel companies in Canada have tended to locate themselves close to markets.

Ontario and Quebec

Other integrated mills and a majority of the smaller steelmaking firms are concentrated in Ontario and Quebec. The Steel Company of Canada (Stelco), Dominion Foundries and Steel (Dofasco) and the Algoma Steel corporation are the three integrated mills in Ontario, accounting for about 80 per cent of Canadian steel production.

The newest integrated steelmaker in

Canada is Sidebec-Dosco, based at Contrecoeur, Quebec, an up-to-date plant fitted with new electric furnaces and a Midland-Rose pelletised iron-ore reduction system.

In addition to the six integrated companies, there are a number of small steelmakers using electric arc furnaces and cold-scrap charges. Rounding out the industry there are several manufacturers with only a variety of rolling mills for furnishing operations and one speciality producer, Atlas Steels, of Welland, Ontario.

The companies are distributed unevenly among the provinces with the highest concentration in the highly industrialised province of Ontario. Most of the big organisations are situated there. Quebec, which contains about 25 per cent of Canada's population, accounts for only 12 per cent of its steel consumption. Generally speaking, the industry is geared and tailored to the needs of local markets. This is true to some extent even of the three giants — Stelco, Algoma and Dofasco — though they also look further afield and sell their products throughout Canada.

Plants across Canada

Stelco is the largest steel producer and its production line covers the widest range. Except for rails and structurals it covers almost the remainder of the spectrum. It has 19 manufacturing plants across the country. Its western plants are major suppliers of Western Canada's steel needs and export to several foreign countries. In Burlington, Ontario, it has recently opened a remarkable research centre — a steel works in miniature with pilot steelmaking and rolling facilities and advanced equipment for physical, chemical and metallurgical experimental analysis.

The second-largest producer is Algoma, the only Canadian manufacturer of wide flange beams, rolling beams up to 24 inches in depth. In 10 years Algoma has spent more than \$300m. in capital expenditures, primarily for new rolling and processing facilities and on projects to control air and water pollution. Their computer-controlled 166-inch plate mill makes the widest range of steel plate products in Canada. Customer orders, scheduling, order tracking and production control are all computer based. Being the most Western of the "Big Three", Algoma exports a larger percentage of its production to the United States than Stelco or the third giant, Dofasco.