

estimated cost of \$18 million. The Steel Company of Canada, also at Hamilton, Ontario, is currently engaged in a programme which includes erection of a 450 thousand-ton blast furnace, to be completed by the end of 1952, and 650 thousand tons of open-hearth steel-furnace capacity, which will be in full production by 1953. This, together with the necessary dock, storage and coke-oven facilities, will involve a total outlay upward of \$45 million. Algoma Steel Corporation Limited at Sault Ste. Marie, Ontario, also has embarked upon an expansion plan which will add a combination mill capable of turning out products such as steel bars, reinforcing rods and skelp for the manufacture of welded pipe and tubing. Dominion Steel and Coal Corporation at Sydney, Nova Scotia, is also carrying forward a programme designed to give higher production. It includes electrification of rolling mills and the construction of steel-furnace capacity. This equipment should be in operation by 1953. New investments by the Quebec Iron and Titanium Company at Sorel, P.Q., include facilities for making pig iron as a by-product of titanium oxide from ilmenite ore. Full scale production of new metal may be reached in 1953.

When the announced plans are completed, capacity for production of pig iron will have increased 45 per cent over 1950; of steel ingots by 30 per cent over 1950; and of rolled and drawn products by 30 per cent over 1950.

This paper sketches the broad outlines of the present picture. In order that current developments may be better appreciated, a brief historical sketch is included, as well as a certain amount of information on the principal sources of domestic demand for the output of iron and steel products. A technical presentation has been deliberately avoided.

Definition

For purposes of this paper, the "primary iron and steel industry" includes:

- 1) production of iron from iron ore, limestone, and coke in blast furnaces
- 2) refining of iron into steel in open-hearth furnaces, electric furnaces and Bessemer converters
- 3) semi-finishing operations, where the hot steel ingots are rolled into blooms, slabs and billets.

Incidental mention is made of some of the finishing-mill operations, where the semi-finished forms (blooms, slabs, billets) are further rolled or drawn into such "shapes" as railroad rails, structurals, plates, sheets, strips, bars, rods, wires, pipes and tubes.

For the sake of simplicity, cast-iron and cast-steel products are handled together with rolling-mill products. Foundry operations in the industry are nevertheless of significant proportions. Of all iron produced in Canada, about 20 per cent takes the form of foundry or malleable pig iron, the remainder (80 per cent) is "basic" iron used for charging steel furnaces. Of all steel made, 8 per cent is used for steel castings, and the balance (92 per cent) for rolled and drawn products.

Reference should be made at this point to the industry-flow chart appended to this paper.