Production of Iron and Steel Industry in Canada

Survey of Dominion Report Shows Opportunity for Development of an Iron and Steel Industry in British Columbia.

The production of iron and steel in Canada during 1918 is the title of a pamphlet issued by the Department of Mines, Ottawa, and presents in detail statistics of production and conditions which are encouraging as far as the steel industry is concerned, but quite discouraging as to the production of iron ore, pig iron and coke. In general it exhibits the industry as only in its infancy. The relation of the Canadian iron and steel industry to the iron resources and possibilities of manufacture in the Province of British Columbia is clearly marked in the production figures for both iron and steel and the imports and exports of both raw materials and finished products of Canada as a whole.

The actual quantity of iron ore derived from Canadian iron mines during 1918 was with the exception of the year 1911 the lowest since 1900, with a total of 211,608 tons, and for many years has not been more than 5 per cent. of the domestic requirements in iron.

The metallurgical industry, based upon imported ores, has continued to develop and in both pig iron and steel attained its maximum output during 1918, but is still supplying but a fraction of Canada's requirements in manufactured iron and steel products. The average annual production of pig iron during the last seven years has been a little in excess of one million tons, a large percentage of which has been converted into steel. The annual production of steel has nearly doubled since 1912, amounting during 1918 to 1,873,708 tons. Supplementing the domestic production of steel, the annual imports of iron and steel products in so far as it is possible to determine quantities, considerably exceeded 1,000,000 tons.

The summary of the 1918 activities are as follows: Iron ore shipped from mines, 211,608 tons; Canadian iron ore charged to blast furnaces, 96,745 tons; imported iron ore charged to blast furnaces, 2,146,995 tons; iron ore charged to steel furnaces, 48,599 tons; pig iron made in blast furnaces, 1,163,520 tons; pig iron made in electric furnaces, 32,031 tons; pig iron and ferro-alloy consumption, 1,316,025 tons; pig iron used in steel furnaces, 897,537 tons; steel ingots and castings made, 1,873,708 tons; steel rails made, 162,747 tons; Canadian coke used in iron blast furnaces, 561,135 tons; imported coke used in iron blast furnaces, 861,522 tons; iron and steel, imported, 786,097 tons. The value of the pig iron produced was $33,497,171. The value of iron and steel goods exported was $54,764,742, and that of iron and steel imported was $169,538,669. The shipment of Canadian iron ores were chiefly from the Province of Ontario, taking up 201,119 tons of a total of 211,608 tons shipped. Quebec shipped 8,159 tons and British Columbia 2,200 tons, being magnetite from Texada Island and bog iron from Alta Lake on the Pacific Great Eastern Railway. The total of production of pig iron in Canada in 1918 was 1,195,151 tons, as against 1,170,480 tons in 1917. Electric furnace production was 32,031 tons, as compared with 13,690 tons the previous year, making a considerable increase in this class of pig iron production, Nova Scotia and Ontario taking up practically the whole of this production.

Of the 20 blast furnaces built in Canada, 15 were in blast during 1918. These furnaces consumed 96,745 tons of Canadian ore, 2,146,995 tons of imported ore, 561,135 tons of Canadian coke, 861,522 tons of imported coke, and 755,660 tons of limestone. Of the eleven electric furnaces operating in 1918, two operated in British Columbia, namely that at Port Moody and the Tudhope plant at Vancouver. The report mentions the bounties which are given the production of iron ore by the Province of British Columbia, and the government efforts to stimulate the industry.

The production of steel was from 27 separate plants, including eight electric furnaces operated by 24 companies. The total production of steel ingots and steel castings during 1918 was 1,873,708 tons, as compared with 1,745,734 tons in 1917. The 1918 production included open-hearth steel, 1,746,334 tons; electric steel, 119,130 tons, and crucible and convertable steel 8,244 tons. The production of the rolling mills in 1918 was 162,747 tons of steel rails, 154,789 tons of wire rods, 451,430 tons of bars and plates, and 395,644 tons of forged steel, blooms, billets, slabs, etc.

There has as yet been no production of tin plate in Canada. Imports during 1918 were 72,844 tons, valued at $11,403,837. A development is now in progress whereby the electric steel furnace plant and buildings of the British Forgings, Ltd., at Toronto, have been taken over by another company, with a view to the manufacture of steel sheets to include black sheets, galvanized sheets and tin plate. This plant, it is expected, will be in operation by the summer of 1920.

The total value of the exports of iron and steel total $54,764,742, as compared with $46,791,681 in 1917. These chiefly include pig iron and ferra-alloy, scrap-iron and steel, wire and wire nails, billets, bars, rods and rails, agricultural implements, automobiles and other manufactures.

The unfavorable position of the Canadian iron and steel industry is reflected in the total of imports which for 1918 made up $169,538,669, as compared with $187,191,534 in 1917. The development of Ontario and Nova Scotia are progressing in the direction of increased production and wider variety of manufacture. But with these heavy imports chiefly from the United States, it can readily be seen what are the possibilities for Canadian manufacture for Canadian consumption. Due to geographical relationship it is quite likely that the United States industry will dominate prairie and Ontario markets for a number of years to come, and because of the scarcity of iron resources may permanently dominate those markets. Yet greater efforts for the exploitation and use of our own iron resources would reduce this proportion of domestic manufacture to importation considerably.

With the known iron resources of British Columbia, together with coking coal and limestone deposits available, it is apparent that little stimulation is needed to make a successful beginning for the establishment of an iron and steel industry in British Columbia. Some developments in this direction must soon take place and its economic bearing on our future industrial position can scarcely be exaggerated.

AN ACT TO INCORPORATE ENGINEERS

Mr. F. W. Anderson, member for Kamloops in the Provincial Legislature, Victoria, has introduced a bill for the incorporation of professional engineers in the Province of British Columbia for the protection of the engineering profession and the public. The protection to the engineers lies in that an unqualified or an unregistered engineer may practise in the province being in competition with those engineers practising their profession normally resident in the province. The protection to the public lies in the object of the proposed act, that no unqualified engineer be permitted to carry on practice within the province. By Mr. Anderson's Act an association is created and all engineers in order to practise will be required to join this Association and receive a license and to use the title of "professional engineer." Those engineers who have been five years in practise prior to the passing of the Act shall be entitled to a license without examination and similarly with those who have practised engineering previous to the war and have gone overseas.

Any person who comes to the Province and shall produce the proper credentials to the association may be given a license and the express exception is made with regard to non-resident engineers as follows: "Notwithstanding