

THE IRON AND STEEL INDUSTRY OF CANADA; NOTES ON ITS PRESENT AND FUTURE POSITION*

By D. H. McDougall,

General Manager, Dominion Steel Corporation

IN reviewing the iron and steel industry in Canada, a clear distinction must be drawn between the position during war time, and the position that may be forecasted after the war.

The present condition of the steel and iron industry is one of artificial stimulation, brought about by the action of numerous temporary factors, prominent among which are: Extraordinary demand for munitions steel; increased cost of transportation, accompanied by congested railroads, and shortage of shipping; an unparalleled coal shortage; and a severe and increasing shortage of labor.

These factors, all abnormal and arising out of war conditions, have rendered temporarily obsolete all hitherto accepted standards of economics, and they have been accompanied by an increased cost of living, large increases in wages, and increases in the selling prices of steel and steel products. No one can say how far these extraordinary conditions will extend, or how long they will last, but some day the world will resume its normal course, and the laws that govern normal times will again operate.

Therefore, in considering the after-war situation of the Canadian steel industry, we should see what the permanent essentials of a successful steel industry are, apart from present unusual and evanescent conditions.

Factors that favor success and permanence in steel and iron manufacture are:—

Geographical location, giving cheap access to world markets, and opportunities for the cheap assemblage of raw materials.

Close proximity of metallurgical coal, iron ore of good grade, and limestone deposits of suitable quality. All these raw materials should be accessible in large quantities, and so placed as to render mining costs and transportation reasonably cheap.

General conditions favoring the manufacture of steel in large tonnage.

A review of the iron ore and coal deposits of Canada will show that such a combination is to be found in very few places in Canada, and that already large steel and iron works exist at the localities where the manufacture of iron and steel is permitted by natural conditions to rest upon a permanent and commercial foundation.

The location of iron and steel plants in all parts of the world has been primarily determined by the proximity of coal, and it does not seem probable that any steel plant can exist and pay profits in normal times which has not to hand a plentiful and inexpensive supply of metallurgical coal. It is perhaps hardly an exaggeration to say that the steel industry is always an outgrowth of a coal mining industry.

Present conditions favor the commencement of small war industries. For example, the time is opportune for the opening up of small and easily accessible coal areas, the operation of which in normal times was not profitable; and in the same way, small smelting plants and small works for making munitions have been commenced and

successfully worked because of the unbalanced state of demand and supply. These passing conditions, on the other hand, act to the disadvantage of large and long-established concerns, or at the most they offer merely an opportunity to get rid of the load of debt that is the legacy of the depression that preceded the war and persisted for some time after hostilities commenced.

After-war conditions will eliminate most of these small ventures, and in the days of financial stress that are surely coming the mainstay of industry and the hope of the country will be the large and long-established companies, who, if they are wise will have stored financial reserves and expended profits on rehabilitation of plant, as a safeguard against the future.

Applying these general principles to specific cases, it would seem advisable that the energies of the country should be concentrated on ensuring the future of the large steel works on Sydney Harbor and on the Great Lakes, and that these existing works should be looked to for the production of steel and iron in large quantities, because in these places only is there available a sufficient quantity of coal, iron-ore and limestone.

For the treatment of steel in small quantities to produce tool-steels, crucible-steel and special alloyed steels, the electric furnace has a future, and industries of this kind will probably increase in the populous parts of Quebec and Ontario.

It is also advisable that any increase in the rolling and forging capacity of Canadian steel works should take place at the large and established plants referred to. These plants have hitherto regarded the manufacture of rails as their chief activity, but in the future, and with a view to after-war conditions, it seems probable that the rolling of ship-plates and other commercial shapes will become necessary. It is self-evident that the manufacture of finished steel products can nowhere be so satisfactorily and economically carried on as at the existing plants.

Considering particularly the question in what way it may be possible to obtain some considerable increase in the production of iron and steel in the future, that is, after the war, the first point to be determined is: Allowing for the rolling in Canada of steel shapes and forgings now finished outside of Canada, for all the export business obtainable, and for all Canada's own requirements in iron and steel, what tonnage of iron and steel over and above the existing capacity of Canadian works will be required?

Summarizing, and applying these principles, it would appear that the Canadian steel industry should be guided towards two main ends, namely:—

That the present abnormal demand for steel should be supplied as far as possible by the extension of existing plants.

That these existing plants should prepare to enlarge the variety of their finished products.

That should it then appear there was a necessity for greater production of iron and steel such as to require new plants, these plants should comply with the factors that have already been named as requisite to commercial permanence, and as giving ability to compete in world markets.

By following along these general lines, the existing plants will be extended, rehabilitated and modernized, and given an opportunity to accumulate financial reserves to carry them successfully through the troubled days ahead, and they will be placed in a position enabling them to enter world markets, and to compete with other countries, particularly the United States.

*Canadian Mining Institute's October Bulletin.