

ness created by the enormous demand upon this resource, for which there is no substitute, and without which modern civilization cannot continue.

But, whatever the fears regarding the world's future supply of iron ore, this pessimistic outlook does not apply to Canada, for at the present time, we are dependent upon other countries to supplement our own product by importing of their iron in the crude and manufactured state to the value of about \$62,000,000 annually. In 1908 it was \$61,819,698. We thus see that conservation of Canada's own iron ore resources has, unfortunately, been practised only too successfully. We are, and will continue to be, industrially handicapped until our iron industry is developed sufficiently to meet the demands of our own country and render us independent of outside sources for this all-important metal.

V. t we need is not conservation of our iron ore resources, but vigorous development of our iron industry. The very fact that the Government has been, and is, giving a bonus on pig iron and steel produced in this country shows how great is the need for such an industry.

By the methods hitherto employed in the production of pig iron and steel, cheap metallurgical fuel was a necessity; hence blast furnaces could only be erected and do a successful business where iron ore, coal and flux could be cheaply assembled. This is possible, however, only in the extreme east and west of the Dominion.

The middle provinces, though possessing iron ore deposits and fluxes, lack the needed metallurgical fuel. The development of a vigorous iron industry, with coke at \$5.00 to \$6.00 per ton, could not be looked for in these provinces, if it was necessary to depend on blast furnace methods.

The comparatively recent investigations of the electro-thermic process for the smelting of iron ores have demonstrated that only one-third of the carbon necessary in the blast furnace is needed in electric furnaces. This brings the cost of the metallurgical fuel required for smelting down to a reasonable figure. The adoption, therefore, of this process would lead, not alone to the utilization of our domestic iron ores in the provinces of Ontario and Quebec, but would greatly conserve our fuel supply by substituting hydro-electric energy for the heat energy of two-thirds of the carbon required in the blast furnace.

It may be interesting to state briefly what has been accomplished up to the present time in the development of electric smelting processes. It is only five years since the Commission appointed by the Dominion Government to investigate the different electro-thermic processes for