

which in 1929 produced over 40 p.c. of the gross value of the entire production of the group. In 1929 this industry included 10 blending plants and 15 plants for the refining of crude oils. The refining plants were located with a view to economy of distribution, based on the greatest accessibility to the source of supply and the proximity of the markets. The refineries on the eastern and western coasts obtain their crude petroleum from South America, Mexico and the United States by tank steamers, bringing transportation costs to a minimum. Those situated in the central part of the Dominion absorb the domestic production of crude oil and draw additional supplies from the United States by rail or pipeline. The more general use of the automobile has resulted in a continually expanding demand for gasoline and lubricating oils. The installation of oil-using equipment in industrial plants for generating power and in buildings of various kinds for heating purposes has also increased the consumption of fuel oil.

The coke and gas industry of Canada has developed chiefly along two lines: the one, in the principal centres of population, to provide a gas supply for the residents; and the other, in association with blast-furnaces, smelters and metallurgical works, to provide coke and gas for fuel, while some by-product coke plants provide a high-grade coke sized for domestic fuel and competing with anthracite coal. Gas is the most important product of the industry and coke the other chief product, while there are numerous products such as tar, ammonia and ammonium sulphate, light oils, etc.

Other industries of a varied nature included in this group are the manufacture of asbestos products, the glass industry, the manufacture of abrasives, the preparation of ornamental and monumental stone, the bottling of aerated waters and the manufacture of various clay products and cement.

Chemicals.—Recent important developments in Canada's chemical industry centre around the operations of two large companies, namely, Canadian Industries Limited and the Consolidated Mining and Smelting Company.

In June, 1930, the new sulphuric acid plant of Canadian Industries Limited at Copper Cliff, Ontario, commenced operations. This plant utilizes the sulphur in the waste converter gases from the new nickel-copper smelter at that point and has a capacity of about 150 tons of acid per day. In July, 1930, the company opened its new nitre cake works at Copper Cliff; this commodity is used in large quantities in the smelter operations for the separation of nickel and copper and heretofore was mostly imported from the United States. Now the natural sodium sulphate is brought from the extensive lake deposits in Saskatchewan and treated with acid from the new acid works to produce a nitre cake suitable for smelter use. It is interesting to note that the imports of nitre cake declined from 80,872 tons at \$1,081,984 in 1929 to 15,276 tons at \$219,173 in 1930 and 14,258 tons at \$175,648 in 1931 (calendar years).

Another important contribution to Canada's chemical industries was made by the same company at its plant at Sandwich, Ontario, where an addition to the caustic soda works provides for the manufacture of synthetic ammonia, the first to be made in Canada. In the electrolysis of salt brine, liquid chlorine and caustic soda are produced and in the process large quantities of hydrogen are liberated. This formerly went to waste but is now collected and pumped to the ammonia department where it is burned in air and the excess is united under pressure with the remaining nitrogen to make pure liquid ammonia. This plant commenced to produce in June, 1930.