

In 1987, the Canadian industry operated at close to 83% of the effective production capacity. Rock salt accounted for 66% of total salt shipments. Ontario is the largest producer of salt accounting for two-thirds of total production, followed by Alberta and Quebec. In 1986, domestic salt consumption amounted to 8.1 million tonnes of which 50% was used for ice and snow control on streets and highways, and 45% for the manufacture of chemicals, namely chloralkalies. About 25% of total production is exported, almost totally to the United States.

Sulphur. Canada is the world's third largest producer of sulphur-in-all-forms, a leading producer of elemental sulphur and the major exporter of brimstone, accounting for 40% of global trade. In 1987, shipments remained similar to the previous year's level at 7.7 million tonnes, while the value of production declined 20% to \$774 million, due to lower prices resulting from a weak demand for fertilizers. Contract prices for offshore exports of elemental sulphur from Vancouver showed a steady decline during 1987, starting at US\$102-110 a tonne in January and dropping to US\$88-99 a tonne in the second half of 1987, a 25% drop from 1986.

Alberta is the major producer of elemental sulphur accounting for 85% of total production. Canadian sulphur in elemental form is obtained as a byproduct in the production of sour natural gas, in the extraction of oil from tar sands and in the refining of petroleum. Sulphur dioxide, produced in the roasting of sulphide ores of nickel, copper, zinc and lead, is recovered as byproduct liquid sulphur dioxide and as sulphuric acid at several Canadian smelters. In addition to these involuntary producers of sulphur, a small amount of pyrrhotite is roasted expressly for sulphuric acid.

In 1987, about 90% of sulphur shipments were in elemental form with 75% going to offshore markets and 13% to the United States; the remainder was consumed in Canada, mainly for the manufacture of fertilizers, and pulp and paper.

Over the past 10 years, Canadian inventory remelts have complemented production. From a peak of 21 million tonnes in 1971, inventories declined to about 7 million tonnes by the end of 1987. With the current annual remelt rate, stocks are forecast to be depleted by 1991; however, further development related to gas and tar sand projects are expected to increase the production tonnage of elemental sulphur, up to 8 million tonnes by the year 2000, a 34% increase over 1987 tonnage. Meanwhile, Canada's offshore market share is likely to decrease, down to 30%, due to new developments in the USSR and Saudi Arabia.

Nepheline Syenite. Canada is the western world's largest producer and exporter of nepheline syenite, from two operations on Blue Mountain, 40 km northeast of Peterborough, Ont.

Shipments totalled 467 500 t in 1986 and 499 100 t in 1987. Value of shipments were, respectively, \$18.9 million and \$21.4 million.

Most production is exported to the United States. Nepheline syenite is preferred to feldspar as a source of essential alumina and alkalis in glass manufacture. Other uses include the manufacture of ceramics, enamels, paints, papers, plastics and foam rubber.

10.5 Structural materials

In 1987, total value of construction in Canada was estimated at \$80,856 million, up approximately 13% from 1986. Construction represented 14.5% of Gross Domestic Product, in 1987, and housing starts were approximately 246,000 units, up 23% from 1986.

Gypsum. Canada supplied about 24% of US requirements for crude gypsum. Canadian production in 1987 was approximately 8.8 million tonnes.

Cement. The Canadian industry has capacity to produce 16.6 million tonnes of cement from a total of 20 plants. In 1987, cement production was 12.2 million tonnes which represented a capacity utilization of 73%. Plants utilizing the dry process constituted over 70% of Canadian capacity.

Mineral aggregates. Production of mineral aggregates, sand, gravel and crushed stone in 1987 was approximately 366 million tonnes.

10.6 Manufactured metals

Aluminum. Canada, the second largest aluminum producer in the western world, produced 1.54 million tonnes of aluminum in 1987. Canada is the largest aluminum exporter in the world, with exports currently of about 1.1 million t/y. The United States is the largest market for Canadian aluminum exports; shipments to the US totalled 859 253 t in 1987.

Three companies operate primary aluminum smelters in Canada. One company has five smelters in Quebec, located at Jonquière, Isle-Maligne, Grande Baie, Beauharnois and Shawinigan, and one at Kitimat, BC, with a combined annual capacity of 1 075 000 t. The company also operates an alumina refinery at Jonquière; its output is consumed by the company's smelters in the region. The other two companies each operate one smelter in Quebec; one