Clay and clay products. Since 1982, the value of shipments of clay and clay products has been increasing steadily, by an average growth rate of 17.1% annually. In 1986, shipments amounted to $180.4 million, an increase of 30% over 1985, due mainly to higher levels of activities in Ontario, Quebec and British Columbia. During 1986, rationalization of the clay brick industry resulted in fewer but larger corporations. Several potential sources of kaolin have been investigated in southern Saskatchewan and northern Ontario. These silica sand-kaolin deposits could be mined by open-pit and produce china clay suitable for the paper and the paint industries in Ontario, Western Canada and northwestern United States.

Potash. Canada is the world's largest exporter of potash. Shipments in 1986 were 7.0 million tonnes (potassium dioxide equivalent) valued at $579 million, down because of the recession from a peak of 7.2 million tonnes ($1,020 million) in 1980. In 1986 the industry operated at 65% capacity. There are eight mines in Saskatchewan, with four controlled by the Saskatchewan Potash Corp., a provincial government Crown corporation directing 40% of capacity.

In New Brunswick the first potash mine was put into production in 1983 and a second mine went into production in 1985.

About 95% of world potash output of 27.5 million tonnes is used in fertilizer, the balance for industrial purposes.

Salt. Rock salt is produced at four underground mines located in Ontario, Quebec and Nova Scotia and as a byproduct from two potash mines in New Brunswick and Saskatchewan. Brine is also produced in 11 plants for the manufacture of evaporated salt and chloralkalies.

Canada is the world's fifth largest producer of salt with shipments amounting to 11 million tonnes in 1986, an increase of 10% over 1985; the value of shipments rose by 12% to $242 million. Approximately 50% of the total consumption of salt was used for the manufacture of chloralkalies and 45% for ice and snow control on streets and highways. Rock salt accounted for 66% of total salt shipments. About 26% of total production is exported, almost totally to the United States. Ontario is the major producer of salt, accounting for 60% of total production, followed by Alberta and Quebec.

Sulphur. Canada has been the world's largest exporter of elemental sulphur since 1968. Shipments peaked in 1985 at 8.9 million tonnes valued at $1.1 billion. In 1986, shipments declined to 7.6 million tonnes valued at $994 million. The price of elemental sulphur reached a record high of US$140 a tonne f.o.b. (free on board) Vancouver in 1985 and declined to about US$125 at the end of 1986.

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 1985 and 1986 about 90% of sulphur shipments were in elemental form with 80% going offshore and more than half the remainder going to the United States.

Canadian production of sulphur peaked at 7.1 million tonnes in 1973. Yet during the period 1968 to 1978 production exceeded shipments by such an amount that stockpiles of elemental sulphur reached 21 million tonnes. Since 1979 stocks have been reduced to 7.0 million tonnes as shipments have exceeded production and reduction of stockpiles is expected to continue. While production of sulphur from sour gas and other sources will remain relatively stable, the demand for sulphur will continue to increase.

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 467 000 t in 1985 and 485 000 t in 1986. Value of shipments were, respectively, $17.9 million and $20.4 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 1986, total value of construction in Canada was approximately $63,000 million, up approximately 4% from 1985. In 1986, construction represented 13% of Gross National Product. Housing starts in 1986 were approximately 185,000 units, up 11.4% from 1985.

Gypsum. Canada supplied over 25% of US requirements for crude gypsum. Canadian production in 1986 was approximately 8.5 million tonnes.