

material and to provide protection around X-ray equipment and nuclear facilities.

Canada is one of the world's largest producers of lead, ranking third after the United States and Australia.

Nearly all lead is obtained from sulphurated ores, the most common of which is galenite. It is usually found in conjunction with other sulphurated ores, most frequently zinc and often copper. Consequently these co-products are generally extracted and concentrated. Lead is different from most other common metals in that considerable quantities of it are produced by recycling (scrap iron and old automobile batteries in particular). This is known as secondary production.

Some 80 per cent of the lead produced in Canadian mines is exported to other countries. Canada's biggest customers for lead ores and concentrates are Japan, the United States and West Germany. The United States and Britain purchase most of the refined lead.

Programs to reduce production costs in Canadian lead mines and refineries have already been included in business strategies. In this way Canada's lead ore will continue to be processed without interruption.

Nickel

Nickel is used mainly as an alloy to give strength, hardness and corrosion resistance to other metals. There are in fact more than 3 000 nickel-base alloys, each used for particular purposes. For example, nickel is combined with chrome and alloyed with steel to produce stainless steel, at present one of the world's most valuable materials.

Canada ranks first among nickel producing countries and supplies about 30 per cent of world demand. The largest deposits of nickel discovered so far lie in the Sudbury basin in northern Ontario.

The nickel extracted in Canada is found in combination with various quantities of sulphur, iron and copper, and small quantities of other minerals. The ore has a crystalline structure and is a sulphide. The sulphurated ores are usually found in deep veins and are most often recovered by the underground extraction method.

Refined nickel is exported to 40 countries. The major customer for Canadian nickel is the United States. The other main purchasers are Finland, the Benelux countries, Britain and Japan.

Nickel plays a key part in the energy, aerospace, transportation, chemical and industrial processing industries, as well as in mining operations and agriculture. These are sectors that should expand considerably in the future; thus nickel consumption for the coming decade should increase at an average annual rate of 2 to 4 per cent.