

ARCTIC ARTIFICIAL DEEP FREEZE

The two main problems of the Canadian Arctic — food shortage and economical independence — are being solved by the federal Department of Northern Affairs with artificial deep freeze. Thanks to the know-how and reliability of Canadian refrigeration designers, contractors and servicemen, the project is meeting with success.

COMMUNITY SUPPLY

Artificial freezers in the Arctic serve two purposes, according to J.W. Evans of the Industrial Division of the Department of Northern Affairs and National Resources. There is the community freezer, which receives its power from the local electricity supply. It is used to store a community's annual supply of perishable goods delivered by the yearly "sea lift". In addition, local perishable foods, meat and fish are obtained in season and stored. Other agencies, such as the Departments of Transport, National Health and Welfare, National Defence and business firms, all use refrigeration equipment extensively in their establishments in the Arctic.

SUPPLYING LOCAL INDUSTRY

The other purpose for which the use of freezing equipment is vital is to supply local industry, usually an Arctic fishery. The principal object of this industry is the catch, conservation and delivery of the Arctic char — a gourmet's delight, which is being readily accepted by leading restaurants in Montreal, Toronto, Boston, New York, and other big cities on the North American continent. In the future, the addition of white-whale steaks, seal flippers and other exotic delicacies is possible.

The construction of deep freezers and cold-storage rooms in such places as George River, Povungnituk and Cape Dorset has become necessary because of the particularities of char fishing. The Arctic char — a fish of salmon type related to the trout — is migratory, and can be caught only during July and August. In some places, Cambridge Bay for example, char can be caught during a single 12-day period only. At this time of year, even the northernmost Eskimo settlement experiences a short summer, with temperatures well above the freezing point.

Despite this short season, the delicate catch has to be stored until the arrival of the yearly supply ship. The initial deep freeze will also preserve the fish during its long trip to the ultimate consumer.

POWER FOR FREEZERS

To help the Eskimo fishermen, the freezing equipment is taken to the site of operations. It may be set up on shore, as in the Eastern Arctic, or on a barge, as in the Mackenzie Delta. In both cases, the unit must be self-contained, since it is operated away from a fixed source of electric power. The system followed in the past has been to power two independent units with diesel engines. The engines were used to "belt-drive" a compressor and an alternator. The alternator supplied power to electric motors which turned the fans and to the electrical system which operated the automatic defrosting cycle. The

reason for two independent units was to guard against failure of one unit. If this happened, the other unit would be used to hold the catch until repairs were made.

Owing to the experience of the first years, and to allow a more efficient operation, all deep freezers and storage rooms in the Arctic are now being rebuilt to use electrically-driven "Freon 502" refrigeration equipment, which consists of fully automatic units, delivered complete in the compact size of 25½" x 35½" x 7'2½". Driven by a 5 h.p. "Copelamatic" air-cooled hermetic compressor, the units are supplied with two evaporator coils and two fans, have electric defrost circuits with a very short defrosting cycle, and are vapour tight. The electrical control box is equipped with colour coded scales.

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CANADA — W.I. SPORTS EXCHANGE

It was recently announced by Health and Welfare Minister Judy LaMarsh that Canada and the West Indies would participate in a unique exchange programme in sport and recreation as part of the International Co-operation Year programme. Miss LaMarsh said her department would sponsor the exchange programme by a \$21,000 grant to the National Council of the Young Men's Christian Association. The YMCA will send a team of coaches and athletes to several West Indian countries this summer, where they will conduct coaching clinics in their own specialities. They will also take part in sports meets and study sports and games popular in the Caribbean.

WEST INDIANS TO CANADA

Following this tour, a number of West Indian athletes will be invited to attend coach-training clinics in various parts of Canada. Many of the clinics, for leadership training in recreational activities as well as sports, receive assistance under the national fitness and amateur sport programme.

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HARBOURS EXPERT TO SWEDEN

Charles K. Hurst, Chief of the Maintenance and Operations Division of the Harbours and Rivers Engineering Branch, will head a three-man delegation representing the Department of Public Works at a meeting of the Permanent International Association of Navigation Congress in Stockholm, Sweden, from June 27 to July 10. He will be accompanied by J.A. Brown, District Engineer, Halifax, and F.A. Blanchard, Area Engineer, Vancouver.

The Congress last met four years ago in Baltimore, Maryland.

A paper on Canada's fishing harbours will be presented jointly by Mr. Hurst and Mr. Blanchard. Subjects of discussion of particular interest to the Public Works delegation include fishing harbours, ports and maritime structures, the economic relations of travel by road, rail and sea, inland navigation and small-boat harbours.