



This drawing of the new Royal Canadian Navy ice-breaker, being built at Sorel, Quebec, illustrates its overall ruggedness. The vessel is a modification of the *Eastwind* class used by the United States Coast Guard.

## NORTHERN NEWS

### New Royal Canadian Navy Ice-breaker

The R.C.N. ice-breaker which is being built at Marine Industries, Sorel, Quebec, will in many respects be similar to the United States Coast Guard *Eastwind* Class. The R.C.N. ship will include, however, some modifications which have been suggested by experience with the U.S. ships and by observations of the behaviour of these and other ice-breaking vessels.

The ice-breaker will be 269 feet long with a breadth of 63 feet, 6 inches. Displacement will be 5,400 tons, and the maximum draught 29 feet. It will be propelled by a 10,000 hp. diesel-electric system. The machinery layout will be similar to that of *Eastwind*, but the bow propeller will be omitted. Accommodation will be provided for a crew of 13 officers and 160 other ranks and for a number of observers of officer rank; for this reason the Ward Room will be enlarged and improved.

The vessel is not expected to operate single-handed against enemy concentrations, so the gun armament which was a feature of the original American ship, is to be considerably reduced. This will allow more room for quarters and stores, together with increased provision for radio and radar.

A flight deck aft will take helicopters of the type now in use in the R.C.A.F. If necessary, a seaplane can be carried in place of the helicopters. As a result of experience in recent years, the shell plating on icebreakers has been increased. The new R.C.N. ship will have plates 1½ inches thick and of special high-tensile steel. It seems inconceivable that any ice could penetrate such a massive steel wall, but in case it did there will be an inner skin protecting the vital parts of the ship.

As with the U.S. ice-breakers the Canadian vessel will be fitted with heeling tanks as a safeguard against being frozen in. Temperatures at sea in the Arctic are not, of course, so extreme as those inland, but even so, special steps are necessary to maintain suitable temperatures inside. In the R.C.N. ship this will be effected throughout by four inches of fibreglas insulation in place of the cork formerly used.

The boats carried will be of two types, motor lifeboats for use in open water, and Landing Craft specially strengthened for use in ice, where stores and personnel have to be landed. Experience has shown that this type of vessel is very useful under arctic conditions where the ice-covered beaches are very hard on conventional boats.