

## ANNEX 5

### ICE ACCRETION APPLICABLE TO ALL TYPES OF CRAFT

#### 1 Icing allowances

1.1 For craft operating in areas where ice accretion is likely to occur, the following icing allowance shall be made in the stability calculations:

- .1 30 kg/m<sup>2</sup> on exposed weather decks and gangways;
- .2 7.5 kg/m<sup>2</sup> for projected lateral area of each side of the craft above the waterplane;
- .3 the projected lateral area of discontinuous surfaces of rail, sundry booms, spars (except masts) and rigging and the projected lateral area of other small objects shall be computed by increasing the total projected area of continuous surfaces by 5% and the static moments of this area by 10%;
- .4 reduction of stability due to asymmetric ice accumulations in cross-structure.

1.2 For craft operating in areas where ice accretion may be expected:

- .1 Within the areas defined in 2.1, 2.3, 2.4 and 2.5 known to have icing conditions significantly different from those in 1.1, ice accretion requirements of one half to twice the required allowance may be applied.
- .2 Within the area defined in 2.2, where ice accretion in excess of twice the allowance required by 1.1 may be expected, more severe requirements than those given in 1.1 may be applied.

*Icing allowances in the areas defined in 2.1 to 2.5 will be specially considered on an individual basis, and a detailed submission should be made to MCA Headquarters. This submission should include the operational seasons and area, as well as the information required under 1.3 below.*

1.3 Information shall be provided in respect of the assumptions made in calculating the condition of the craft in each of the circumstances set out in this annex for the following:

- .1 duration of the voyage in terms of the period spent in reaching the destination and returning to port; and
- .2 consumption rates during the voyage for fuel, water, stores and other consumables.

#### 2 Areas of icing conditions

In the application of 1, the following icing areas shall apply:

- .1 The area north of latitude 65°30'N, between longitude 28°W and the west coast of Iceland; north of the north coast of Iceland; north of the rhumb line running from latitude 66°N, longitude 15°W to latitude 73°30' N, longitude 15°E, north of latitude 73°30' N between longitude 15°E and 35°E, and east of longitude 35°E, as well as north of latitude 56°N in the Baltic Sea.
- .2 The area north of latitude 43°N bounded in the west by the North American coast and the east by the rhumb line running from latitude 43°N, longitude 48°W to latitude 63°N, longitude 28°W and thence along longitude 28°W.
- .3 All sea areas north of the North American continent, west of the areas defined in .1 and .2.
- .4 The Bering and Okhotsk Seas and the Tartary Strait during the icing season.
- .5 South of latitude 60°S.

A chart to illustrate the areas is attached.

### **3 Special requirements**

Craft intended for operation in areas where ice accretion is known to occur shall be:

- .1 designed to minimize the accretion of ice; and
- .2 equipped with such means for removing ice as the Administration may require.

