situation is described by eight meteorological characteristics. The results of classification of snowfall situations into avalanching and non-avalanching ones are as follows: reliability of ρ is from 75% to 91%, H from 0.15 to 0.51; based on independent material the reliability of ρ is from 63% to 85%, H from 0.10 to 0.56.

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ICING RATE ON STATIONARY STRUCTURES UNDER MARINE CONDITIONS

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ABSTRACT. Icing on stationary structures is an increasingly serious problem as off-shore drilling operations in the sub-polar regions becomes more popular. Since this problem is less complicated than icing on a ship, an attempt was made to calculate accretion rate using existing data.

The rate of ice accumulation R can be calculated from $R = C_f C_c F$ where F is the mass flux of the water drops and C_f and C_c are the proportions of spray frozen on the surface and coefficient of capture of drops, respectively. C_c can be close to unity for larger drops such as sea spray. Although many other factors may contribute, C_f seems to be a strong function of the air temperature.

Mass flux can be written as $F = \frac{4}{3}\pi\rho \int n(r)\, Vr^3\, dr$ where $n(r)$ is the number of drops of radius r in unit volume, V is the wind velocity, ρ is the density of water; $n(r)$ is a function of wind velocity and height of observation. For a stationary structure, the mass flux is primarily dependent upon the wind speed.

The ice accretion rate R, calculated using published data on the size distribution of sea spray and using a capture efficiency C_c of 1 agrees surprisingly well with the diagrams given by previous authors for icing on ships.