

LL70(Jan
2005)**Corrosion Margin for Hatch Cover Design**

Reg. 16 (5)(d), amendments to the Protocol of 1988 relating to the International Convention on Load Lines, 1966 (Res. MSC. 143(77))

Regulation 16 (5) (d) reads:

Hatchways closed by weathertight covers of steel or other equivalent material

All hatch covers shall be designed such that:

- (a) the product of the maximum stress determined in accordance with the above loads and the factor of 1.25 does not exceed the minimum upper yield point strength of the material in tension and the critical buckling strength in compression;
- (b) the deflection is limited to not more than 0.0056 times the span;
- (c) steel plating forming the tops of covers is not less in thickness than 1% of the spacing of stiffeners or 6 mm if that be greater; and
- (d) an appropriate corrosion margin is incorporated.

Interpretation

The “appropriate corrosion margin” for hatch covers of cargo holds in position 1 and 2 and above, defined as the corrosion addition t_s which is to be added to the net thickness t_{net} required by (a), (b) and (c) is:

1. for Bulk Carriers, Ore Carriers and Combination Carriers, as defined in UR Z11.2:

- single skin hatch covers, a corrosion addition $t_s = 2.0$ mm for all plating and stiffeners;
- double skin hatch covers, a corrosion addition $t_s = 2.0$ mm for top and bottom plating and $t_s = 1.5$ mm for the internal structure.

2. for other vessels:

- single skin hatch covers, a corrosion addition $t_s = 2.0^i$ mm for all plating and stiffeners;
- double skin hatch covers, a corrosion addition $t_s = 1.5^i$ mm for top and bottom plating and $t_s = 1.0$ mm for the internal structure.

- i) Corrosion addition $t_s = 1.0$ mm for the hatch covers in way of cellular cargo holds intended for containers.

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The above corrosion margins have been defined based on the assumption that corrosion protection and renewals as given in UR S21.6.1 is complied with for all ship types subject to regulation 16 (5) (d) of the 1988 Load Line Protocol.

For corrosion addition $t_s = 1.0$ mm it is assumed that the thickness for steel renewal is t_{net} and the thickness for coating or annual gauging is $t_{net} + 0,5$ mm.

Note: This UI LL70 is to be uniformly implemented by IACS Members and Associates on ships constructed (i.e. keel laid) from 1st January 2005.

END