

Stress Concentration Factors of the Slots of Shafting Systems

Amended Guidance

Guidance for the Survey and Construction of Steel Ships Part D

Reason for Amendment

Formulae for the strength calculations of propulsion shafting systems are stipulated by IACS in Unified Requirement (UR) M68 and these formulae have been incorporated into Part D of the Rules. In order to evaluate unusual shapes such as shafts with longitudinal slots, IACS added a general safety factor to these strength calculation formulae which takes into account stress concentrations created by torsional vibrations. Moreover, with regard to this safety factor, requirements for alternative evaluation determined by shaft diameter measurements stipulate that another safety factor derived from considering actual stress concentration factors in detail can be used as well.

After UR M68 was adopted, an error in one of the stress concentration calculation formulae used as an alternate evaluation was discovered. As a result, IACS adopted UR M68(Corr.1) in March 2012 to correct this error.

Therefore, relevant requirements have been amended in accordance with IACS UR M68(Corr.1).

Outline of Amendment

The detailed evaluation formula for the stress concentration factors of the slots of shafting systems has been amended according to IACS UR M68(Corr.1).