

MEMORANDUM.

Method adopted in London Office for determining the scantlings of rudder couplings when subjected to bending.

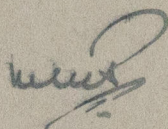
(1) Owing to the fact that the fixity at the upper bearing in service is somewhat indeterminate the bending moment at the coupling is assumed to be not less than the maximum obtaining at the bearing.

(2) The modulus of resistance to bending of the coupling should be determined by taking the moment of area of the bolts on one side of the coupling about the axis passing through the centre of the outside bolt on the opposite side of the coupling and parallel to the plane of the rudder.

(3) The modulus of resistance to twisting should be calculated from a polar axis through the centre of gravity of the bolt area.

(4) The combined bending and twisting stress in the bolts should not exceed the comparative stress in the rudder head.

(5) The thickness of the coupling should be the same as the diameter of the bolts, and the material outside the bolts should be two-thirds the diameter of the bolt.



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