

Mechanical Joint Pull-out Tests

Amended Guidance

Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use

Reason for Amendment

Mechanical joints used for piping joints are required to be pull-out tested in order to confirm that connecting pipes do not become detached when axial loads caused by design pressures are imposed. Such requirements are specified in IACS Unified Requirement (UR) P2.11 and have been already incorporated into the Society's "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use".

Current pull-out testing confirms the soundness of mechanical joint assemblies only with respect to the axial forces caused by internal pressure. Since such testing is not sufficient for verifying a coupling's ability to withstand axial forces encountered during actual service such as thermal expansion, vibration, etc., IACS decided to review the test procedure. As a result, IACS amended the test requirements so that external axial forces are to be applied in addition to the conventional axial forces caused by design pressures. This was adopted as UR P2.11(Rev.3) in September 2012.

Accordingly, relevant rules were amended based on UR P2.11(Rev.3).

Outline of Amendment

Relevant rules were amended so that the pull-out test procedures for mechanical joints specify that the design pressures and external axial forces are to be applied simultaneously.