

Pipe Joint Materials

Amended Guidance

Guidance for the Survey and Construction of Steel Ships Parts D and N

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

Reason for Amendment

Part D of the Rules for the Survey and Construction of Steel Ships specifies requirements for the materials and welding of butt welded pipe joints and slip-on sleeve welded pipe joints (hereinafter referred to collectively as “pipe joints”) of Group I pipes, etc used in Japanese-flagged ships. These requirements specify that the materials used for such pipe joints are to comply with requirements found in Part K of the Rules for the Survey and Construction of Steel Ships, which state that material tests are to be carried out prior to the forming process. In addition, these requirements also specify that material tests after the forming process are required for pipe joints when hot forming is used because the material characteristics of the pipe joints are changed by the heat used in the forming process.

ClassNK conducted a review of the above requirements and determined that the soundness of pipe joints can sufficiently be verified through material tests only after forming process, where hot forming is used, as long as certain conditions are satisfied.

As a result, ClassNK amended relevant requirements to specify that material tests are only needed for pipe joints after they are formed in cases where the materials used for pipe joints are to comply with some recognized national standard, and the forming process used for the pipe joints has been approved in advance by the Society.

For non-Japanese-flagged ships, however, requirements related to material tests of the pipe joints used for Group I pipes, etc. are not clear. Taking advantage of the opportunity provided by the above review, the above amendment was also incorporated into requirements for non-Japanese-flagged ships.

Outline of Amendment

The main details of this amendment are as follows:

- (1) Specified requirements related to the test requirements at manufacturing plants for pipe joints used for Group I pipes, etc.
- (2) Specified requirements that in cases where hot forming, etc. is used for pipe joints during their manufacturing process, materials complying with a national standard such as JIS, etc. may be used for pipe joints on the condition that pipe joints are approved for use in advance by the Society.
- (3) Specified requirements for the approval of use of pipe joints in cases where materials complying with national standards such as JIS, etc. are used for the pipe joints of Group I pipes, etc.