

Aluminium Alloy Pipes

Amended Rules and Guidance

Rules for the Survey and Construction of Steel Ships Part K

Guidance for the Survey and Construction of Steel Ships Parts GF, K, and N

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

Reason for Amendment

There are cases where aluminium alloy seamless pipes and longitudinally welded pipes (hereinafter referred as “aluminium alloy pipes”) are used for the cargo and process piping of ships carrying liquefied gases in bulk. The approval for manufacturing of aluminium alloy pipes used in such cases is typically given on a case-by-case basis in reference to relevant JIS Standards since such pipes tend to mainly be used in a limited quantity in specific locations.

In recent years, however, there has been an increased interest in the use of liquefied natural gas due to environmental concerns. In addition, the shipping industry has developed ships using liquefied natural gas as fuel due in attempt to lessen the impact a ship has on the marine environment and the demand for such ships is expected to continue to increase. In this connection, it is assumed that there will also be a corresponding increase in the use of aluminium alloy pipes.

Accordingly, relevant requirements were established to specify approval procedures for aluminium alloy pipes used for the cargo and process piping of ships carrying liquefied gases in bulk and for the fuel and process piping of ships using low-flashpoint fuels. These amendments were made in reference to the actual approval records as well as relevant industry standards such as JIS H4080, etc.

Outline of Amendment

- (1) Specified requirements related to tensile test specimens and bend test specimens for aluminium alloy pipes.
- (2) Specified requirements related to chemical composition and mechanical properties, etc. for aluminium alloy pipes.
- (3) Specified requirements related to tests and surveys for the approval of manufacturing processes of aluminium alloy seamless pipes.

Amended Requirements

Rules for the Survey and Construction of Steel Ships

Part K: Table K2.1, Table K2.4, 8.2

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Part GF: GF7.4.1

Part K: K8.2

Part N: N6.4.1

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

Part 1 Chapter 7