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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46095-2025

**Ships and marine technology - Specification of high
manganese austenitic steel thin strips used for LNG tanks on
board ships**

船舶与海上技术 船上液化天然气罐用高锰奥氏体薄钢板规范

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is equivalent to ISO 23430-5:2019 "High manganese austenitic steel sheet for liquefied natural gas tanks on ships - Marine engineering and marine technology" specification".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Marine Ships (SAC/TC12).

1 Scope

This document specifies high-manganese (Mn) alloys for use in shipboard liquefied natural gas (LNG) tanks that possess good weldability and atmospheric corrosion resistance.

Requirements for austenitic thin steel plates.

This document applies to thin steel sheets with a thickness range of 0.3mm to 6.0mm.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 148-1 Metallic materials - Charpy impact test - Part 1: Test methods Note. GB/T 229-2020 Metallic materials Charpy impact test method (ISO 148-1:2016, MOD) ISO 6892-1 Metallic materials-Tension testing-Part 1: Tests at room temperature Note. GB/T 228.1-2021 Metallic materials-Tension testing-Part 1: Test at room temperature (ISO 6892-1:2019, MOD) ISO 7438 Metallic materials - Bend test Note. GB/T 232-2024 Metallic materials - Bending test method (ISO 7438:2020, MOD) tankers)

3 Terms and Definitions

The following terms and definitions apply to this document.

Steels with a manganese content of 24% to 34% by mass, in which austenite is the main phase at room temperature and operating temperature.

Note: See Table 1.

Design temperature

The lowest temperature at which materials are selected for use in loading, transporting goods, or fuel tanks.

4 General Requirements

4.1

The manufacture, forming and weldability of high-manganese austenitic thin steel sheets shall conform to recognized international, regional or national standards.