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

**GB/T 11038-2009**

Replacing GB/T 11038-2000

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**Welding specification for pressure parts of marine auxiliary  
boiler and pressure vessel**

船用辅锅炉及压力容器受压元件焊接技术条件

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## Table of Contents

- 1 Scope
- 2 Normative references
- 3 Requirements
  - 3.1 General requirements
    - 3.1.1 Welder qualification and tags
    - 3.1.2 Welding Materials
    - 3.1.3 Welding environment

### Foreword

This standard replaces GB/T 11038-2000 "marine auxiliary boiler and pressure vessel pressure parts for welding." This standard compared with GB/T 11038-2000, the main changes are as follows:

- The standard name to "marine auxiliary boiler and pressure vessel pressure parts welding technology";
- To increase and refine the relevant provisions and requirements of the welding procedure qualification;
- Increasing the general requirements for welding materials;
- Increase distance requirements for fillet welds and butt welds main pressure parts between the edges;
- An increase in the furnace for the heat treatment is not large workpiece heat treatment requirements;
- Information about the requirements and mechanical properties of welded test specimens welded test specimens. The standard proposed by China State Shipbuilding Corporation. This standard by the National Marine Machinery Standardization Technical Committee. This standard was drafted. Green Zhangjiagang Shazhou Boiler Co., Ltd., Qingdao Marine Boiler Factory Co., Ltd., China Shipbuilding Industry Integrated Technology Surgery Institute of Economic Research, China Classification Society Qingdao Branch, Qingdao Kai boilers Equipment Co. The main drafters of this standard. Liu Guoliang, Weihua Xing, Qiu Yudong, Zhang Yonggang, car Rui, Wang Bo, Zhong Chongxin. This standard replaces the standards previously issued as follows:
  - GB 11038-1989, GB/T 11038-2000. Marine auxiliary boiler and pressure vessel pressure element Welding conditions

## 1 Scope

GB/T 11038-2009 is the Chinese national standard on welding specification for pressure parts of marine auxiliary boiler and pressure vessel, in the field of shipbuilding and marine structures. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 9 March 2009 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 November 2009. Classification: ICS 47.020.20, CCS U41. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the marine auxiliary boiler and pressure vessel (hereinafter referred to as Boiler and Pressure Vessels) pressure parts welding materials, welding technology Evaluation, welding, weld inspection, mechanical properties and heat treatment after welding test welding test plate. This standard applies to the design pressure is less than 2.5MPa, medium is water and saturated steam boiler; design pressure is less than 6.4MPa, Medium is water or air pressure vessel.

## 2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 226 steel macrostructure and defect etching test method ( GB/T 226-1991, neq ISO 4969. 1980)

GB/T 228 metal materials at room temperature tensile test method ( GB/T 228-2002, eqv ISO 6892.1998)

GB/T 229 metal Charpy pendulum impact test method ( GB/T 229-2007, ISO 148-1.2006, MOD)

GB/T 232 metallic materials - Bend test ( GB/T 232-1999, eqv ISO 7438. 1985)

GB/T 985.1 gas welding, arc welding, gas welding and beam welding Recommended groove ( GB/T 985.1-2008, ISO 9692-1.2003, MOD)

GB/T 985.2 SAW recommended groove ( GB/T 985.2-2008, ISO 9692-2.1998, MOD)

GB/T 3323 metal fusion welded joints radiography

JB/T 4730.3 Non-destructive testing of pressure equipments - Part 3. Ultrasonic testing

JB/T 4730.4 Non-destructive testing of pressure equipments - Part 4. Magnetic particle testing

JB/T 4730.5 Non-destructive testing of pressure equipments - Part 5. penetrant testing  
Industrial boilers T-joint butt weld ultrasonic inspection regulations (1998-12-30) Quality and Technical Supervision

### **3.1.1 Welder qualification and tags**

3.1.1.1 Where the pressure in the boiler and pressure vessel components welded welder qualification tests shall be the appropriate classification society regulations made together welder Georgia certificate and can only be qualified as a category corresponding to their welding work.

3.1.1.2 After welding, the welder should be marked with low stress stamp mark near the main welder weld and welding record card marked nodes and welding Seal number.

### **3.1.2 Welding Materials**

3.1.2.1 Welding pressure elements include. welding rod, wire, flux, welding gas should meet the relevant standards, and there is Certificate.

3.1.2.2 welding electrodes, wires should be subject to classification societies recognized and qualified certificates.

3.1.2.3 pressure components should be used, such as welding or ultra-low hydrogen hydrogen material required drying before use.

3.1.2.4 For welding consumables not approved by the Society, according to the relevant provisions of the Society re-examination after passing can be used for production.

### **3.1.3 Welding environment**

3.1.3.1 When welding environment any of the following circumstances, the absence of effective protection measures, non-welding.