

ICS 25.160.01
CCS J 33



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

GB/T 43906-2024

Quality requirements for brazing of metallic materials

金属材料硬钎焊质量要求

(English Translation)

Issued on: April 25, 2024

Implemented on: November 1, 2024

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting:

This document is modified to adopt ISO 22688:2020 "Quality requirements for brazing of brazed metal materials":

This document has the following structural adjustments compared to ISO 22688:2020:

- Appendix B corresponds to Appendix C in ISO 22688:2020;
- Appendix C corresponds to Appendix D in ISO 22688:2020;
- Appendix D corresponds to Appendix B in ISO 22688:2020:

The technical differences between this document and ISO 22688:2020 and their reasons are as follows:

- Added normative reference GB/T 12467.1 (see Chapter 3) to facilitate the application of this document;

- The normative reference GB/T 19000 replaced ISO 9000 and GB/T 33148 replaced ISO 857-2 (see Section 3 Chapter) to adapt to my country's technical conditions;
- ISO 13585 (see Chapter 3, 6:4:2) is replaced by the normative reference GB/T 41113 to apply my country's technical conditions;
- Added the term and definition of "brazing welder" (see 3.3) to facilitate the application of this document;
- Added applicable brazing methods: other brazing (see Chapter 4);
- Deleted "These quality requirements only refer to those aspects of product quality that are affected by the brazing method and are not limited to the type of product:" System" (see Chapter 4 of ISO 22688:2020), which is repeated in the context;
- ISO 9712 (see 6.5:2, 7:5:2) is replaced by the normative reference GB/T 9445 to apply my country's technical conditions;
- ISO 17663 (see 6.10) is replaced by the normative reference GB/T 40741 to apply my country's technical conditions;
- ISO 18279 (see 6.12) is replaced by the normative reference GB/T 33219 to apply my country's technical conditions;
- Deleted the normative references to ISO 11745 and ISO 17662 (see 6.4:2, 7:4:2, 6:6:3, 6:14) to adapt to my country's technical conditions;

The following editorial changes were made to this document:

- In order to meet the requirements of my country's standard writing, the name of the standard is changed to "Quality Requirements for Brazing of Metal Materials";
- Appendix D adds 23 domestic and international standards such as GB/T 13679 and ISO 18496;
- One foreign standard was updated in Appendix D: AS/NZS1167-1 was changed to AS/NZSISO 17672:

1 Scope

This document specifies the quality requirements and selection criteria for brazing of metallic materials:

This document is applicable to brazing manufacturing in workshops and at installation and maintenance sites:

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document:

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document:

GB/T 9445 Qualification and certification of non-destructive testing personnel (GB/T 9445-2015, ISO 9712:2012, IDT) GB/T 12467.1 Quality requirements for fusion welding of metallic materials Part 1: Selection criteria for corresponding grades of quality requirements (GB/T 12467.1-2009, ISO 3834-1:2005, IDT) GB/T 19000 Quality Management System Fundamentals and Vocabulary (GB/T 19000-2016, ISO 9000:2015, IDT) GB/T 33148 Brazing Terminology (GB/T 33148-2016, ISO 857-2:2005, MOD) GB/T 33219 Imperfections in brazed joints (GB/T 33219-2016, ISO 18279:2003, MOD) GB/T 40741 Post-weld heat treatment quality requirements (GB/T 40741-2021, ISO 17663:2009, MOD) GB/T 41113 Brazing welders and brazing operators' skills assessment (GB/T 41113-2021, ISO 13585:2012, NEQ)

3 Terms and definitions

The terms and definitions defined in GB/T 12467.1, GB/T 19000, GB/T 33148, GB/T 41113 and the following terms and definitions apply to this document:

application standard application standard A product standard that applies to a specific sector or category:

Examples: Specific standards for pressure vessels, process piping, structural components, or storage tanks:

NOTE Application standards may be based in whole or in part on general standards but may contain additional, fewer or different requirements:

Person responsible for brazing and related manufacturing activities:

NOTE The manufacturer (3:6) may appoint different persons to perform different brazing and related tasks:

Brazer

A person who uses hand-operated welding guns, torches and other devices to perform manual or semi-automatic brazing:

[Source: GB/T 41113-2021, 3:1] **3.4 Brazing operator** Operate mechanical or automatic brazing equipment for brazing, the operation of which can directly affect the quality of the brazed joint (hereinafter referred to as the joint) personnel: