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

GB/T 44840-2024

**Welding procedure qualification test for upset(resistance butt)
and flash welding
(English Translation)**

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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 15614-13:2023 "Welding procedure specifications

and qualification assessment for metallic materials - Welding procedure tests" Part 13: Resistance butt welding and flash butt welding.

The technical differences between this document and ISO 15614-13:2023 and their reasons are as follows.

To adapt to my country's technical conditions, the scope has been revised (see Chapter 1); -the normative reference GB/T 228.1 replaces ISO 6892-1 (see 6.2.2, 7.3.1); the normative reference GB/T 2651 replaces ISO 4136 (see 6.2.2); ISO 5137 is replaced by the normative reference GB/T 2653 (See 6.2.3, 7.3.2, 7.3.4); replace ISO 6520-2 (see Chapter 3) with the normative reference GB/T 6417.2;

The normative reference GB/T 8366 replaces ISO 669 (see Chapter 3); the normative reference GB/T 11345 replaces ISO 17640 (see 7.2.6); replace ISO 14732 (see Chapter 5) with the normative reference GB/T 19805; replace ISO 14732 (see Chapter 5) with the normative reference GB/T 19805 GB/T 19866 replaces ISO 15607 (see Chapter 3) with the normative reference GB/T 19867.5.

Replaced ISO 15609-5 (see Chapter 4, Chapter 9); replaced ISO 23277 with the normative reference GB/T 26953 (See 7.2.3); replace ISO 17639 with the normative reference GB/T 26955 (see 7.4...

GB/T 27552 replaces ISO 9015-2 (see 6.2.5, 7.5); GB/T 29711 is replaced by the normative reference ISO 23279 (see 7.2.6); ISO 11666 (see 7.2.6) is replaced by the normative reference GB/T 29712 to apply to our National technical requirements;

Deleted ISO 15620:2019 and adopted the form of direct reference to the diagram (see Figure 1). Deleted the "for example" in 7.2.1.

content;

Added GB/T 26951 (see 7.2.4), GB/T 26952 (see 7.2.4), GB/T 26954 (see 7.2.5) and GB/T 32259 (see 7.2.2) is cited for ease of application.

The following editorial changes have been made to this document.

The name of the standard is changed to "Welding procedure qualification test for resistance butt welding and flash butt welding";

Deleted the footnotes of clauses 6.2.4 and 7.3.3 of ISO 15614-13:2023.

ISO 4063:2023 is replaced by the informative reference GB/T 5185 (see Table A.2, Table A.3).

1 Scope

This document specifies the welding procedure qualification test methods and requirements for resistance butt welding and flash butt welding of metallic materials.

This document applies to welding procedure qualification tests for resistance butt welding and flash butt welding of metallic materials.

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 latest version (including all amendments) applies to this document.

In this document.

GB/T 228.1 Tensile tests on metallic materials - Part 1: Test methods at room temperature (GB/T 228.1-2021, ISO 6892-1:2019, MOD) GB/T 2651 Metallic materials welds-Destructive tests-Transverse tensile test (GB/T 2651-2023, ISO 4136:2022, MOD) GB/T 2653 Bend test method for welded joints (GB/T 2653-2008, ISO 5173:2000, IDT) GB/T 6417.2 Classification and description of imperfections in metal pressure welded joints (GB/T 6417.2-2005, ISO 6520-2:2001, IDT) GB/T 8366 Resistance welding Mechanical and electrical requirements for resistance welding equipment (GB/T 8366-2021, ISO 669:2016, IDT) GB/T 11345 Non-destructive testing of welds-Ultrasonic testing technology, test levels and assessment (GB/T 11345-2023, ISO 17640:2018, IDT) GB/T 19805 Welding Operator Skill Assessment (GB/T 19805-2005, ISO 14732:1998, IDT) GB/T 19866 Welding procedure specifications and general principles for their qualification (GB/T 19866-2005, ISO 15607:2003, IDT) GB/T 19867.5 Resistance Welding Procedure Specification (GB/T 19867.5-2008, ISO 15609-5:2004, IDT) GB/T 26951 Non-destructive testing of welds-Magnetic particle testing (GB/T 26951-2011, ISO 17638:2003, MOD) GB/T 26952 Non-destructive testing of welds - Acceptance levels for magnetic particle testing of welds (GB/T 26952-2011, ISO 23278.

2006, MOD)

GB/T 26953 Non-destructive testing of welds - Acceptance levels for weld penetrant testing (GB/T 26953-2011, ISO 23277.

2006, MOD)

GB/T 26954 Nondestructive testing of welds Eddy current testing of welds based on complex plane analysis (GB/T 26954-2024, ISO 17643:2015, IDT) GB/T 26955 Metallic materials welds-Destructive tests on welds-Macro and micro examination (GB/T 26955-2011, ISO 17639:2003, MOD) GB/T 27552 Metallic materials welds-Destructive tests on welded joints-Microhardness test (GB/T 27552-2021, ISO 9015-2:2016, MOD) GB/T 29711 Non-destructive testing of welds-Characterization of internal discontinuities in welds by ultrasonic testing (GB/T 29711-2023, ISO 23279:2017, IDT) GB/T 29712 Acceptance levels for ultrasonic testing of welds for non-destructive testing (GB/T

29712-2023, ISO 11666:2018,