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

GB/T 44841-2024

**Welding procedure qualification test for non-alloyed and
low-alloyed cast irons**

非合金及低合金铸铁焊接工艺评定试验

(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 is required.

This document is modified to adopt ISO 15614-3:2008 "Specification and qualification of welding procedures for metallic materials - Welding procedure qualification test Part 3 Part. Fusion welding of unalloyed and low-alloy cast irons.

Compared with ISO 15614-3:2008, this document has the following structural adjustments.

Added informative appendix A, appendix B and normative appendix C, adjusted appendix A of ISO 15614-3:2008 to Appendix D.

This document contains technical differences from ISO 15614-3:2008. These differences are noted in the outer margins.

A vertical single line (|) is used to mark the differences, and Appendix A provides a list of the corresponding technical differences and their reasons.

The following editorial changes have been made to this document.

The revised document is named "Non-alloy and base alloy cast iron welding procedure qualification test" -Added informative appendix A and appendix B;

The format of informative Annex A in ISO 15641-3:2008 has been modified, and the report content has been added (see Annex D);

Added the index symbol description for Figure 3.-

1 Scope

This document specifies the test methods and requirements for welding procedure qualification for fusion welding of non-alloy and low-alloy cast irons.

This document applies to welding procedure qualification tests for non-alloy and low-alloy cast iron and steel, or for welding to other non-alloy and low-alloy cast iron 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 228.2-2021, ISO 6892-1:2019, MOD) GB/T 1348 Ductile iron castings (GB/T 1348-2019, ISO 1083:2018, MOD) GB/T 2651 Destructive tests on welds of metallic materials - Transverse tensile test (GB/T 2651-2023, ISO 4136:2022, MOD) GB/T 3375 Welding terminology GB/T 5185 Welding and related process code (GB/T 5185-2005, ISO 4063:1998, IDT) GB/T 9439 Grey iron castings (GB/T 9439-2023, ISO 185:2020, NEQ) GB/T 9440 Malleable iron castings (GB/T 9440-2010, ISO 5922:2005, MOD) GB/T 16672 Welds - Working positions - Definition of inclination and rotation angles (GB/T 16672-1996, idt ISO 6947.

1990)

GB/T 18851.1 Nondestructive testing-Penetrant testing-Part 1: General principles (GB/T 18851.1-2012, ISO 3452-1:2008, IDT) GB/T 19866 Welding procedure specifications and general principles for their qualification (GB/T 19866-2005, ISO 15607:2003, IDT) GB/T 19867.1 Arc Welding Procedure Specification (GB/T 19867.1-2005, ISO 15609-1:2004, IDT) GB/T 19867.2 Gas Welding Procedure Specification (GB/T 19867.2-2008, ISO 15609-2:2001, IDT) GB/T 19868.2 Welding procedure qualification based on welding experience (GB/T 19868.2-2005, ISO 15611:2003, IDT) GB/T 19868.4 Procedure qualification based on pre-production welding tests (GB/T 19868.4-2005, ISO 15613:2004, IDT) GB/T 24733 Austempered Ductile Iron Castings (GB/T 24733-2023, ISO 17804:2020, NEQ) GB/T 26955 Metallic materials welds-Destructive tests on welds-Macro and micro examination (GB/T 26955-2011, ISO 17639:2003, MOD) GB/T 32259 Non-destructive testing of welds - Visual testing of fusion welded joints (GB/T 32259-2015, ISO 17637:2003, MOD) GB/T 39255 Shielding gases for welding and cutting (GB/T 39255-2020, ISO 14175:2008, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 3375, GB/T 19866 and the following apply to this document.