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

GB/T 40800-2021

**Specification and qualification of welding procedures for
production welding of steel castings**

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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 of Standardization Documents"

Drafting.

This document uses the redrafting method to modify and adopt ISO 11970.2016 "Specifications for Welding Procedure Qualification of Steel Castings".

Compared with ISO 11970.2016, this document has many structural adjustments. Appendix A lists this document and ISO 11970.2016.

The chapter number comparison list.

Compared with ISO 11970.2016, this document has technical differences.

The vertical single line (|) is marked, and a list of the corresponding technical differences and their reasons is given in Appendix B.

This document has also made the following editorial changes.

---Added informative Appendix A, Appendix B and Appendix E;

---In Appendix C of this document, the format of the informative Appendix A in ISO 11970.2016 has been revised, and the report content has been added.

1 Scope

This document specifies the pre-regulations for the welding process of steel castings, the welding process qualification, the inspection of test pieces and test pieces, the scope of application of the process qualification, welding

Process evaluation report.

This document is applicable to the qualification of arc welding procedures for steel castings.

2 Normative references

The content of the following documents constitutes an indispensable clause of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.

GB/T 226 Steel Macrostructure and Defect Inspection Method

GB/T 228.1 Tensile test of metallic materials Part 1. Room temperature test method (GB/T 228.1-2010, ISO 6892-1.

2009, MOD)

GB/T 229 Charpy pendulum impact test method for metallic materials (GB/T 229-2020, ISO 148-1.2016, MOD)

GB/T 2650 Welded joint impact test method (GB/T 2650-2008, ISO 9016.2001, IDT)

GB/T 2651 Tensile test method for welded joints (GB/T 2651-2008, ISO 4136.2001, IDT)

GB/T 2653 Bend test method for welded joints (GB/T 2653-2008, ISO 5173..2000, IDT)

GB/T 3375 Welding Terminology

GB/T 4340.1 Vickers hardness test of metallic materials Part 1. Test method (GB/T 4340.1-2009, ISO 6507-

1.2005, MOD)

GB/T 5185 Welding and related process method code (GB/T 5185-2005, ISO 4063.1998, IDT)

GB/T 19418-2003 Guidelines for the quality classification of steel arc welded joint defects (ISO 5817.1992, IDT)

GB/T 19866 Welding procedure specification and general principles of qualification (GB/T 19866-2005, ISO 15607.2003, IDT)

GB/T 19868.3 Process qualification based on standard welding procedures (GB/T 19868.3-2005, ISO 15612.2004, IDT)

3 Terms and definitions

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

3.1

Arcwelding

A fusion welding method that uses an electric arc as a heat source.

3.2

Repairwelding

Welding to repair defects in steel castings.

4 Pre-Regulations for Welding Process (pWPS)

The manufacturer should prepare the welding procedure pre-regulation (pWPS) in accordance with the provisions of GB/T 19868.3.