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Welding procedure qualification test for copper and its alloys

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to amend and adopt ISO 15614-6:2006 "Metal Material Welding Procedure Specification and Qualified Welding Procedure Evaluation"

Fixed test part 6: arc welding of copper and copper alloys".

Compared with ISO 15614-6:2006, this standard has technical differences, and the clauses involved in these differences have been passed on the outer margins.

The vertical single line (|) of the position is marked, and Appendix A gives a list of the corresponding technical differences and their reasons.

This standard also made the following editorial changes.

---Modified the standard name;

---Revised references.

This standard was proposed and managed by the National Welding Standardization Technical Committee (SAC/TC55).

Drafting organizations of this standard: Harbin Welding Research Institute Co., Ltd., Dongying Yuanjie Petroleum Machinery Co., Ltd., Hefei Handebel Attachments

Technology Co., Ltd., Shanghai Installation Engineering Group Co., Ltd., Xiamen Laikesheng Intelligent Technology Co., Ltd., Foshan Quality and Standardization Research Institute.

1 Scope

This standard specifies the welding procedure qualification test methods and requirements for copper and copper alloys.

This standard is applicable to the welding procedure qualification of arc welding and gas welding of copper and copper alloys.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

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 3323.1 Non-destructive testing of welds. Radiographic testing. Part 1.X and gamma ray film technology

GB/T 3323.2 Non-destructive testing of welds. Radiographic testing. Part 2.X and gamma ray technology using digital detectors

(GB/T 3323.2-2019,ISO 17636-2.2103,MOD)

The definition of GB/T 16672 weld working position inclination and rotation angle (GB/T 16672-1996, ISO 6947..1990, IDT)

GB/T 18851.1 Non-destructive testing Penetrant testing Part 1.General rules (GB/T 18851.1-2012, ISO 3452-1.2008, IDT)

GB/T 19805 Welding operator skill assessment (GB/T 19805-2005, ISO 14732.1998, IDT)

GB/T 19866 Welding procedure specification and general principles of 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 19868.4 Process qualification based on pre-production welding test (GB/T 19868.4-2005, ISO 15613.2004, IDT)

GB/T 22087 Aluminium and aluminum alloy welding joint lack quality classification guide (GB/T 22087-2008, ISO 10042.2005, IDT)

GB/T 26955 Destructive test of welds of metallic materials. Macro and micro inspection of welds (GB/T 26955-2011, ISO 17639.2003, MOD)

GB/T 27551 Destructive test for welds of metallic materials Fracture test (GB/T 27551-2011, ISO 9017.2001, IDT)

GB/T 30563 Copper and copper alloy fusion welding welder skills assessment (GB/T 30563-2014, ISO 9606-3..1999, MOD)

GB/T 32259 Non-destructive testing of welds Visual inspection of welded joints (GB/T 32259-2015, ISO 17637..2003, MOD)

GB/T 39255 Shielding gas for welding and cutting (GB/T 39255-2020, ISO 14175.2008, MOD)

3 Terms and definitions

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

4 welding method

The welding methods applicable to this standard (refer to GB/T 5185-2005 for code) are as follows.

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