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Procedure method for arc stud welding

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Table of Contents

Preface	
1 Scope	1
2 Normative references	1
3 Terms and Definitions	2

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 14555:2017 "Arc stud welding of metal materials for welding".

Compared with ISO 14555:2017, the structure of this document has been adjusted, and the positions of Appendix E and Appendix F have been reversed.

There are technical differences between this document and ISO 14555:2017. The main technical differences and their reasons are as follows.

--- In order to adapt to the technical conditions of our country, the scope has been modified (see Chapter 1);

--- Regarding the normative reference documents, this document has made adjustments with technical differences to adapt to the technical conditions of our country, specific adjustments

as follows.

- * Replace ISO 4063 with GB/T 5185 (see Chapter 3, 6.1, 9.4, Table A.1, Table A.2);
- * Replace ISO 3834-1 with GB/T 12467.1 (see Chapter 3);
- * Replace ISO 14731 with GB/T 19419 (see Chapter 3, 6.2);
- * Replace ISO 14732 with GB/T 19805 (see Chapter 3, 6.1);
- * Replaced ISO 15607 with GB/T 19866 (see Chapter 3);
- * Replace ISO 3834-2 with GB/T 12467.2 (see Chapter 5, 6.2, 7.3, Table 1, 12.1, 12.4, 14.8, Table B.1);
- * Replace ISO 3834-3 with GB/T 12467.3 (see Chapter 5, 6.2, 7.3, Table 1, 12.1, 12.4,

14.8, Table B.1);

* Replace ISO 3834-4 with GB/T 12467.4 (see Chapter 5, 6.2, 7.3, Table 1, 12.1, 14.8, Table B.1);

* Replace ISO 6947 with GB/T 16672 (see 9.5.2, 10.2.8.10, A.2.1.2);

* Replace ISO 14175 with GB/T 39255 (see 9.7.2, A2.1.3);

* Replace ISO 15613 with GB/T 19868.4 (see 10.3.1, 14.7);

* Replace ISO 15611 with GB/T 19868.2 (see 10.4);

* Replace ISO 13918 with GB/T 902.2 (see 11.2, 12.4, A2.4.1, A2.4.2);

* Replace ISO 17636-1 with GB/T 3323.1 (see 11.7);

* Replace ISO 17636-2 with GB/T 3323.2 (see 11.7);

* Replace ISO 9606-1 with GB/T 15169 (see 14.7);

* Replace ISO 9606-2 with GB/T 24598 (see 14.7).

The following editorial changes have been made to this document.

---Change the name of the standard to "Arc Stud Welding Process Method";

--- Deleted terms and definitions that do not appear in the standard text.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document describes the method of arc stud welding and specifies the welding technique review, personnel and equipment, welding procedure plan, welding procedure specification

Relevant requirements such as procedures, welding procedure qualification, test inspection and acceptance criteria.

This document applies to arc stud welding of metallic materials.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, 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 902.2 Welding studs for arc stud welding (GB/T 902.2-2010, ISO 13918.2008, MOD)

GB/T 3323.1 Radiographic testing for non-destructive testing of welds - Part 1.X-ray and gamma-ray film techniques (GB/T 3323.1-2019, ISO 17636-1.2013, MOD)

GB/T 3323.2 Radiographic testing for non-destructive testing of welds - Part 2.X and gamma ray techniques using digital detectors (GB/T 3323.2-2019, ISO 17636-2.2013, MOD)

GB/T 3375 Welding Terminology

GB/T 5185 Welding and related process codes (GB/T 5185-2005, ISO 4063.1998, 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 12467.2 Quality requirements for fusion welding of metal materials Part 2.Complete quality requirements (GB/T 12467.2-2009, ISO 3834-2.2005, IDT)

GB/T 12467.3 Quality requirements for fusion welding of metal materials Part 3.General quality requirements (GB/T 12467.3-2009, ISO 3834-3.2005, IDT)

GB/T 12467.4 Quality requirements for fusion welding of metallic materials Part 4.Basic quality requirements (GB/T 12467.4-2009, ISO 3834-4.2005, IDT)

GB/T 15169 Steel Fusion Welding Welder Skills Assessment (GB/T 15169-2003, ISO 9606-1.2002, IDT)

GB/T 15579.1 Arc welding equipment Part 1.Welding power supply (GB/T 15579.1-2013, IEC 60974-1.2005, IDT)

GB/T 16672 Definition of inclination and rotation angle of welding seam working position (GB/T 16672-1996, ISO 6947.1990, IDT)

GB/T 19419 Welding Management Tasks and Responsibilities (GB/T 19419-2003, ISO 14731.1997, IDT)

GB/T 19805 Skills Assessment of Welding Operators (GB/T 19805-2005, ISO 14732.1998, IDT)

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

GB/T 19868.2 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 test (GB/T 19868.4-2005, ISO 15613.2004, IDT)

GB/T 24598 Welder skills assessment for fusion welding of aluminum and aluminum alloys (GB/T 24598-2009, ISO 9606-2.2004, MOD)

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

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