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

GB/T 29710-2013

Electron and laser beam welding procedure test method

电子束及激光焊接工艺评定试验方法

(English Translation)

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Appendix A (informative) Welding procedure qualification report format (WPQR)

Foreword

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

This standard uses redrafted law revision using ISO 15614-11:2002 "metallic materials and welding procedure qualification of welding technology assessment Setting test Part 11. Electron beam and laser welding "(in English).

This standard and ISO 15614-11:2002 technical differences and their reasons are as follows.

--- On normative references, this standard has been adjusted technical differences, in order to adapt our technical conditions. Adjustment situation Focus is reflected in the status of Chapter 2, "Normative references", the specific adjustments are as follows.

- The ISO 15614-11:2002 International Standard quoted and European standards, instead of using the corresponding standard;

- increase cited JB/T 6061-2007 and JB/T 6062-2007 (see Chapter 7).

This standard also made the following editorial changes.

--- Deleted international standards foreword;

--- Appendix A, "welding procedure qualification report," the format and content to make some adjustments.

This standard by the National Standardization Technical Committee welded (SAC/TC55)

and focal points.

This standard was drafted. Harbin Welding Institute, Harbin Welding Training Institute, Shanghai Institute of Special Equipment Inspection Technology Study hospital.

1 Scope

This standard specifies the electron beam and laser welding procedure qualification test methods.

This standard applies to electron beam welding and laser welding of various types of metallic materials.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 2651-2008 welded joint tensile test method (ISO 4136:2001, IDT) GB/T 2653-2008 welded joint bending test method (ISO 5173:2000, IDT) GB/T 3323-2005 Metal fusion welded joints radiography GB/T 5185-2005 Method Code welding and allied processes (ISO 4063:1998, IDT) GB/T 11345 welds NDT ultrasonic testing, and evaluation of detection level (GB/T 11345-2013, ISO 17640.

2010, MOD)

GB/T 16672-1996 Weld tilt and swivel working position definitions (ISO 6947:1993, IDT) GB/T 19866-2005 General principles (ISO 15607:2003, IDT) welding procedure and assessment GB/T 19867.3-2008 electron beam welding procedure specification (ISO 15609-3:2004, IDT) GB/T 19867.4-2008 laser welding procedure specification (ISO 15609-4:2004, IDT) GB/T 22085.1-2008 electron beam and laser welding joint quality levels for imperfections - Part 1. Steel (ISO 13919-1:1996, IDT) GB/T 22085.2-2008 electron beam and laser welding joint quality levels for imperfections - Part 2. Aluminium and aluminum alloys (ISO 13919-2:2001, IDT) GB/T 26955-2011 metallic materials Destructive tests on welds welds macroscopic and microscopic examination (ISO 17639:2003, MOD) JB/T 6061-2007 Nondestructive Testing welds - Magnetic particle testing JB/T 6062-2007 destructive testing of weld penetration detection ISO 22826:2005 Destructive tests on welds in metallic materials hardness test lasers and electron beam welded joints (Vickers and Knoop hardness test)
(Destructivetestsonweldsinmetallicmaterials-Hardnesstestingofnarrowjoints weldedbylaserandelectronbeam (VickersandKnoophardnesstests))

3 Terms and Definitions

GB/T 19866, the terms and definitions GB/T 19867.3 and GB/T 19867.4 defined apply to this document.

4 Welding process pre-procedure (pWPS)

Electron beam welding process pre-procedure should refer to GB/T 19867.3 preparation, laser welding process pre-procedure should refer to GB/T 19867.4 prepared by. These parameters should specify the allowable range.