

ICS 25.160.10

CCS J 33



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

GB/T 34630.3-2017

**Friction stir welding -- Aluminium and its alloys -- Part 3:
Qualification of welding operators**

搅拌摩擦焊 铝及铝合金 第3部分：焊接操作工的技能评定

(English Translation)

Issued on: September 29, 2017

Implemented on: April 1, 2018

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China, Standardization
Administration of the People's Republic of China**

Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

4 Requirements

5 Certificate

Appendix A (Normative) Operating knowledge of welding equipment functions

Appendix B (Informative) Welding expertise

Appendix C (informative) friction stir welding operation qualification certificate

Foreword

GB/T 34630 "friction stir welding aluminum and aluminum" is divided into five parts.

--- Part 1. Terms and definitions;

--- Part 2. Welding joint design;

--- Part 3. Welding operators skills assessment;

--- Part 4. Welding procedure procedures and assessment;

--- Part 5. Quality and inspection requirements.

This section GB/T 34630 Part 3.

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

This section uses the redrafted law Amendment uses ISO 25239-3:2011 "Friction stir welding aluminum Part 3. Welding operator Skills Assessment "(in English).

This part of ISO 25239-3:2011 technical differences and the reasons are as follows.

--- On the normative references, this section made a technical difference with the adjustment to adapt to China's technical conditions, adjust the situation Concentration reflected in the second chapter "Normative references", the specific adjustments are as follows.

- The international standard quoted in ISO 25239-3:2011 should be replaced by the corresponding standard in our country.

- increase the reference GB/T 3323, GB/T 3375;

- ISO 17636 has been deleted.

This section also made the following editorial changes.

--- The standard name was changed to "friction stir welding aluminum and aluminum alloy Part 3. Welding operator skills assessment";

--- Removed the international standard reference.

This part of the National Welding Standardization Technical Committee (SAC/TC55) and focal point.

This part of the drafting unit. Shanghai Aerospace Equipment Manufacturing Plant, the car in Qingdao Sifang Locomotive Co., Ltd., Institute of Mechanical Science Harbin Welding Institute.

The drafters of this section. Zhao Huihui, Feng Xiaodong, Tao Chuanqi, Guo Lijie, Xiong Yan Yan, Gao Jia Shuang, Li Ying, Zhang Chunbo.

Friction stir welding aluminum and aluminum alloy Part 3. Skill assessment of welding operators

1 Scope

GB/T 34630 provisions of this part of the aluminum and aluminum alloy friction stir welding operators skills assessment requirements.

This section applies to aluminum and aluminum alloy friction stir welding.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 3323 metal fusion welded joints radiography GB/T 3375 welding terminology GB/T 11345 Weld non-destructive testing ultrasonic testing techniques, testing levels and assessment (GB/T 11345-2013, ISO 17640.

2010, MOD)

GB/T 34630.1 friction stir welding aluminum and aluminum alloy - Part 1. Terms and definitions (GB/T 34630.1-2017, ISO 25239-1:2011, MOD) GB/T 34630.4-2017 Friction stir welding aluminum and aluminum alloys - Part 4 - Welding procedure specification and assessment (GB/T 34630.4-2017, ISO 25239-4:2011, MOD) GB/T 34630.5-2017 Friction stir welding aluminum and aluminum alloys - Part 5. Quality and inspection requirements (GB/T 34630.5-2017, ISO 25239-5:2011, MOD)

3 Terms and definitions

GB/T 3375, GB/T 34630.1 defined terms and definitions apply to this document.

4.1 Welding operator skills assessment

The welding operator shall assess the skill by one of the following methods.

- Welding operator skills assessment standard welding test, see 4.3.1;
- Welding procedure qualification test, see 4.3.2;
- Pre-production welding test or production welding test, see 4.3.3;
- Product sampling welding test, see 4.3.4.

In addition, the operator should also be able to skillfully use the welding test equipment, see Appendix A.

Each of the above skill assessment test methods may be accompanied by an additional welding expertise test which is recommended rather than Mandatory, exam content can refer to Appendix B.