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

GB/T 34630.2-2017

**Friction stir welding -- Aluminium and its alloys -- Part 2:
Design of weld joints**

搅拌摩擦焊 铝及铝合金 第2部分：焊接接头设计

(English Translation)

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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 2.

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

This section uses the redrafted law Amendment uses ISO 25239-2:2011 "Friction stir welding aluminum Part 2. Welded joint design" (English version).

This standard and ISO 25239-2:2011 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 25239-2:2011 should be replaced by the corresponding standard in our country.

- Increased reference to GB/T 3375 "welding terminology" to facilitate our practical application.

--- Increased butt welded joint assembly (such as the root gap, wrong edge, etc.) requirements.

This section also made the following editorial changes.

--- The standard name was changed to "friction stir welding aluminum and aluminum alloy Part 2. Welding joint design";

--- Increased information Appendix A aluminum alloy friction stir welding joints commonly used forms.

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, Fang Xifeng, Feng Xiaosong, Guo Li Jie, Xiong Yan Yan, Yin Yuhuan, Zhang Chengcong, Zhang Chunbo.

Friction stir welding aluminum and aluminum alloy Part 2. Welding joint design

1 Scope

GB/T 34630 provisions of this part of aluminum and aluminum alloy friction stir welded joints design 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 324 weld symbol notation (GB/T 324-2008, ISO 2553:1992, MOD) GB/T 3375 welding terminology GB/T 34630.1 friction stir welding aluminum and aluminum alloy - Part 1. Terms and definitions (GB/T 34630-2017, ISO 25239-1:2011, MOD) GB/T 34630.3 friction stir welding aluminum and aluminum alloy - Part 3 welding skills assessment of operators (GB/T 34630-2017, ISO 25239-3:2011, MOD) GB/T 34630.4 friction stir welding aluminum and aluminum alloys - Part 4. Welding procedures and assessment (GB/T 34630.4-2017, ISO 25239-4:2011, MOD) GB/T 34630.5 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 Documents

The document should specify the basic and all special requirements for the weld, such as the critical breaking point, service life, reliability or safety. The document shall specify the main process controls to ensure that the welds produced by welding procedure and inspection meet all design requirements.

Weld symbol should be in accordance with GB/T 324.

4.2.1 Overview

Weldment should be designed to meet the requirements to ensure that it can achieve the final performance requirements.

Welding joint design should consider the necessary material performance data, some welded joints example see Table 1, part of the aluminum alloy stirring friction See Appendix A for examples of wiper joints.