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

GB/T 34630.1-2017

**Friction stir welding -- Aluminium and its alloys -- Part 1:
Terminology and definition**

搅拌摩擦焊 铝及铝合金 第1部分：术语及定义

(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 1.

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

This section uses the redrafted law Amendment uses ISO 25239-1:2011 "Friction stir welding aluminum Part 1. Terms and definitions." this part of ISO 25239-1:2011 technical differences and the reasons are as follows.

- Added tunnel hole definition (see 2.23);
- Increasing the definition of the wrong side (see 2.24);
- In order to facilitate the use and in line with industry custom, the terms in accordance with the method, the name of the tool, location, parameters, types, defects, test types Sorted again;
- Added Hanyu Pinyin index.

This section also made the following editorial changes.

- The standard name was changed to "friction stir welding aluminum and aluminum alloy Part 1. Terms and definitions";
- Deleted the French and German ISO 25239-1:2011 corresponding terms;

--- Modify ISO 25239-1:2011 references;

--- Removed ISO 25239-1:2011 index French and German index.

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

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Friction stir welding aluminum and aluminum alloy Part 1. Terms and definitions

1 Scope

This section GB/T 34630 defines the terms and definitions of friction stir welding of aluminum and aluminum alloy.

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

2 Terms and definitions

Friction stir welding, FSW the use of rotating mixing head in the heat, force coupling forging under the action of forming a solid weld connection method, shown in Figure 1.

Description.

1 --- base metal

2 --- mixing head;

3 --- shoulder;

4 --- stirring needle 5 --- weld surface;

6 --- back side;

7 --- forward side;

8 --- Keyhole.

a Stirring head rotation direction (clockwise/counterclockwise);

b mixing head pressure;

c axial pressure;

d welding direction

e stirring head mention.

Figure 1 friction stir welding basic principle diagram