

ICS 25.160.20

CCS J 33



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

GB/T 36037-2018

Fluxes for submerged arc welding and electroslag welding

Issued on: March 15, 2018

Implemented on: October 1, 2018

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

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

This standard uses the redrafted method to amend ISO 14174.2012 "Classification of fluxes for welding of submerged arc welding and electroslag welding of welding materials."

This standard compares with ISO 14174.2012 in terms of structure, according to classification, technical requirements, test methods, re-inspection and supply technology

Prepare the pieces.

The technical differences between this standard and ISO 14174.2012 and its causes are as follows.

--- With regard to normative references, this standard has made adjustments with technical differences to adapt to China's technical conditions and adjust the situation.

The focus is reflected in Chapter 2, "Normative References," and the specific adjustments are as follows.

- * Adding reference GB/T 25778;
- * Replace ISO 3960 with GB/T 3965 modified to adopt international standards;
- * Replace ISO 14171 with GB/T 5293 modified to adopt international standards;
- * Replace GB/T 29713 with international standards instead of ISO 14343;
- * Delete ISO 80000-1.2009.

--- Increased proliferation of hydrogen code H15 for ease of use.

---According to the actual situation in China, increase the code number 2.5 in the particle size code, and provide the corresponding reference domestic common meshes, in order to

facilitate

application.

---According to the actual situation in China, the requirements for the sulfur and phosphorus content of the flux have been increased.

---According to the actual situation in China, the requirements for the flux welding process performance have been increased.

--- Increased the provisions of the flux particle size test method.

--- The welding wire used for the metallurgical performance test and the determination of diffusible hydrogen content has increased the SU26 welding wire that is commonly used in China.

This standard also made the following editorial changes.

--- The standard name was changed to "Flux for SAW and Electroslag Welding".

This standard is proposed and managed by the National Welding Standardization Technical Committee (SAC/TC55).

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Submerged arc welding and electroslag welding flux

1 Scope

This standard specifies the type, classification code, technical requirements, test methods, retests, and technical conditions of the flux for submerged arc welding and electroslag welding.

Etc.

This standard applies to flux for submerged arc welding and electroslag welding.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 3965 Determination of Diffusion Hydrogen in Deposited Metals (GB/T 3965-2012, ISO 3690.2000, MOD)

GB/T 5293 Classification requirements for non-alloyed steel and fine grain steel solid wire, flux cored wire and wire-flux combination for submerged arc welding

(GB/T 5293-2018, ISO 14171.2016, MOD)

GB/T 25778 Welding Material Purchase Guide (GB/T 25778-2010, ISO 14344.2010, MOD)

GB/T 29713 stainless steel wire and ribbon (GB/T 29713-2013, ISO 14343.2009, MOD)

JB/T 7948 flux chemical analysis method

3.1 Model division

The type of flux is divided according to the applicable welding method, manufacturing method, type of flux, and scope of application.

3.2 Modeling Method

The flux model consists of four parts.

- a) The first part. indicates the welding method applicable to the flux, "S" means that it is suitable for submerged arc welding, "ES" means that it is suitable for electroslag welding;
- b) The second part. indicates the manufacturing method of flux, "F" represents smelting flux, "A" represents sintered flux, and "M" represents mixed flux;
- c) The third part. indicates the flux type code, see 4.1;
- d) Part IV. Indicates the flux application code, see 4.2.

In addition to the mandatory classification code above, according to the negotiation between the supplier and the buyer, an optional code may be added after the model number.

- a) Metallurgical performance code, indicating the degree of flux damage or alloy increase by using numbers, element symbols, element symbols, and combinations of numbers, etc.

See 4.3;

- b) current type code, expressed in letters, "DC" for DC welding, "AC" for AC and DC welding;

c) Diffusion hydrogen code "HX", where X can be 2, 4, 5, 10, or 15, respectively, representing the diffusion of hydrogen per 100 g of deposited metal.

For the maximum amount (mL), see 4.4.

3.3 Model Example

Example 1.

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