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

GB/T 983-2012

Replacing GB/T 983-1995

**Covered electrodes for manual metal arc welding of stainless
and heat-resisting steels**
(English Translation)

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Foreword

This standard rule according to GB/T 1.1-2009 given draft.

This standard is GB/T 983-1995 "stainless steel welding rod," the amendment. Compared with GB/T 983-1995, the main content as follows.

- Electrode and classification models according to ISO 3581:2003 carried out;
- Remove the electrode deposited metal chemical composition of the chromium content of less than 11% of the E502-XX, E505-XX, E7Cr-XX, E5MoV-XX, E9Mo-XX, E11MoVNi-XX and E11MoVNiW-XX seven electrodes Model;
- E317MoCuL-XX model prepared for the E317LMoCu-XX;
- E318V-XX, Cu content E330MoMnWNb-XX and E16-25MoN-XX three types of electrodes from 0.5% adjustment to 0.75%. Si content E318V-XX by no more than 0.90 percent to 1.00%, S content of 0.030% by the adjusted 0.03%, to maintain consistency with the E318-XX; the chemical composition of other types of electrode according to ISO 3581:2003 has been adjusted accordingly;
- Increasing the welding position "4", suitable for all position welding including vertical down welding;
- The mechanical properties of the electrode according to the requirements of ISO 3581:2003 has been adjusted.

This standard uses redrafted law revision of international standards ISO 3581:2003 "welding materials stainless steel and heat-resistant steel electrode arc Coated electrode welding medication classification "(in English).

This standard ISO 3581:2003 and its main technical difference between the following reasons.

- Remove the International Standards Normative documents referenced in direct reference to the corresponding national standards, China has transformed easy carried out;
- Not use electrodes Model "ES" on behalf of stainless steel welding rod, still use the "E" on behalf of the electrode, to facilitate the actual operation;
- Retained E317MoCu-XX, E317MoCuL-XX, E318V-XX, E330MoMnWNB-XX and five E16-25MoN-XX A welding rod models, the technical requirements for the corresponding adjustments to adapt to China's technical conditions;
- Increased E309H-XX, E316LMn-XX, E2594-XX, E2595-XX, E3155-XX and E33-31-XX six electrodes Models to meet the actual application requirements;
- Retains the rod eccentricity Technical indicators to facilitate handling;
- Retains the weld metal corrosion resistance and the technical requirements of the weld ferrite content in order to apply our technical conditions.

For ease of use, this standard also made the following editorial changes.

- Standard name was changed to "stainless steel electrode";
- Standard structure, by category and type, technical requirements, test methods, inspection rules, packaging, labeling and quality certificates were write.

This standard by the National Standardization Technical Committee welded (SAC/TC55) and focal points.

This standard was drafted. Harbin Welding Research Institute, Tianjin Golden Bridge Welding Materials Group Co., Ltd. Shanghai Shen Jia welding, four Sichuan Atlantic Welding Materials Co., Ltd., Beijing Jinwei Welding Material Co., Ltd., Tianjin Bridge Welding Materials Group Co., Ltd., Changzhou Huatong Welding Industry CO., LTD.

Drafters of this standard. Following Chu Jun, Li Liansheng, to Hou Chang, Zheng Xiaohai, Li Dian Zhao, border, mention Li, Li Zhenhua, Qi Wanli.

This standard replaces GB/T 983-1995.

The previous versions of GB/T 983-1995 release case.

- GB/T 983-1967, GB/T 983-1976, GB/T 983-1985.

Stainless steel electrode

1 Scope

This standard specifies the stainless steel electrode model, technical requirements, test methods, inspection rules, packaging, marking and quality certificate.

This standard applies to stainless steel electrode deposited metal chromium content

greater than 11%.

2 Normative references

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

GB/T 1954 iron-chromium-nickel austenitic stainless steel weld ferrite content measurement method (GB/T 1954-2008, ISO 8249:2000, MOD) GB/T 2652 weld and deposited metal tensile test method (GB/T 2652-2008, ISO 5178:2001, IDT) GB/T 4334 crystal between corrosion of metals and alloys stainless steel corrosion test (GB/T 4334-2008, ISO 3651-1.

1998, ISO 3651-2:1998, MOD) GB/T 16672 weld working position and inclination angle of the definition (GB/T 16672-1996, ISO 6947:1993, IDT) GB/T 20878 stainless steel and heat-resistant steel grades and chemical composition Inspection GB/T 25774.1 welding materials - Part 1. Steel, nickel and nickel alloy welding metal preparation and mechanical properties of samples seized Test (GB/T 25774.1-2010, ISO 15792-1:2000, MOD) Testing - Part 3 GB/T 25774.3 welding materials. preparation and examination of T-joint fillet weld specimens (GB/T 25774.3-2010, ISO 15792-3:2000, IDT) GB/T 25775 Technical delivery conditions for welding material product type, dimensions, tolerances and marking (GB/T 25775-2010, ISO 544:2003, MOD) GB/T 25777 welding material deposited metal chemical analysis sample preparation method (GB/T 25777-2010, ISO 6847:2000, IDT) GB/T 25778 welding materials procurement guidelines (GB/T 25778-2010, ISO 14344:2002, MOD)

3.1 Model divided

Deposited metal electrode Model by chemical composition, welding position and type of drug skin divided. Drug skin type a brief description in Appendix A, type control between different standards, see Appendix B.

3.2 Model Methodology

Electrode Model consists of four parts.

- a) The first part of the letter "E" indicates electrode;
- b) The second part is the letter "E" behind the numbers indicate the chemical composition of deposited metal classification, after the number "L" represents a carbon content than Low, "H" represents a high carbon content, if other special requirements of the chemical composition, the chemical composition of elemental symbols on the rear Surface, see Table 1;