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

GB/T 39280-2020

**Rods, wires and deposits for tungsten inert gas welding of non
alloy and fine grain steels**

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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 redrafting method to amend and adopt ISO 636.2017 "Welding materials Non-alloy steel for tungsten inert gas shielded arc welding

And classification of fine-grained steel welding wire and deposited metal".

Compared with ISO 636.2017, this standard has many adjustments in structure. Appendix A lists this standard and ISO 636.2017.

List of number changes;

Compared with ISO 636.2017, this standard has technical differences. Appendix B gives a list of the corresponding technical differences and their reasons.

This standard also made the following editorial changes.

---Revised the standard name to "Non-alloy steel and fine-grain steel solid wire for tungsten inert gas shielded arc welding";

---Added Appendix C (informative appendix) welding wire model comparison.

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

Drafting organizations of this standard. Harbin Welding Research Institute Co., Ltd., Harbin

Welding Institute Huatong (Changzhou) Welding Co., Ltd., Shanghai Welding Equipment Materials Co., Ltd., Shandong Suolide Welding Materials Co., Ltd., Tianjin Bridge Welding Materials Group Co., Ltd., Kunshan Jingqun Welding Materials Technology Co., Ltd., Shanghai Atlantic Welding Materials Co., Ltd., Tianjin Jinqiao Welding Materials Group Co., Ltd., Xiamen Yinduli Industry Co., Ltd., Bao

Jiyou Petroleum Pipe Co., Ltd. (National Petroleum and Natural Gas Pipe Engineering Technology Research Center), Foshan Quality and Standardization Research Institute.

1 Scope

This standard specifies the types, technical requirements and tests of non-alloy steel and fine-grain steel solid filler wires for tungsten inert gas shielded arc welding

Methods, re-inspection and technical supply conditions, etc.

This standard is applicable to non-compliant tungsten inert gas shielded arc welding where the minimum tensile strength of deposited metal is not more than 570MPa.

Gold steel and fine grain steel solid filler wire (hereinafter referred to as "welding wire").

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

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

GB/T 2650 Welded joint impact test method

GB/T 2652 Weld and deposited metal tensile test method

GB/T 3323.1 Non-destructive testing of welds. Radiographic testing. Part 1.X and gamma ray film technology

GB/T 18591 Guide for measurement of welding preheat temperature, interpass temperature and preheat maintenance temperature

GB/T 25774.1 Inspection of welding materials Part 1.Preparation and inspection of mechanical properties of steel, nickel and nickel alloy deposited metals

GB/T 25775 Technical Conditions for Supply of Welding Materials Product Type, Size, Tolerance and Marking

GB/T 25778 Guidelines for Procurement of Welding Materials

GB/T 37910.1-2019 Non-destructive testing of welds, radiographic testing acceptance level

Part 1. Steel, nickel, titanium and their alloys

GB/T 39255-2020 Shielding gas for welding and cutting

3.1 Model division

Welding wire models are classified according to the mechanical properties of the deposited metal, the state after welding and the chemical composition of the welding wire. This standard and other related standards

See Appendix C for the comparison of solid welding wire models.

3.2 Model preparation method

The welding wire model consists of four parts.

1) Part 1. Use the letter "W" to indicate solid filler wire for tungsten inert gas shielded arc welding