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

GB/T 39279-2020

**Wire electrodes, wires, rods and deposits for gas shielded arc
welding of creep-resisting 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 21952.2012 "Welding Materials Classification for Hot Steel Gas Shielded Arc Welding Wire and Deposited Metal".

Compared with ISO 21952.2012, this standard has many adjustments in structure.

Appendix A lists this standard and ISO 21952.2012

A list of changes in chapter numbers.

Compared with ISO 21952.2012, this standard has technical differences. Appendix B gives a list of corresponding technical differences and their reasons.

This standard also made the following editorial changes.

--- Modify the standard name to "Heat Strength Steel Solid Wire for 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).

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Heat-strength steel solid wire for gas shielded arc welding

1 Scope

This standard specifies the models, technical requirements, test methods, retests and supply of heat-strength steel solid wires and filler wires for gas shielded arc welding.

Technical conditions and other content.

This standard is applicable to hot-strength steel solid welding wires and filler wires (with molten metal gas shielded arc welding and tungsten inert gas shielded arc welding).

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 document.

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

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 types are classified according to welding method, mechanical properties of deposited metal, shielding gas type and chemical composition of welding wire. This standard and its

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

3.2 Model preparation method

The welding wire model consists of four parts.

1) Part 1. Use the letter "G" to indicate solid wire for MIG welding, and "W" for tungsten inert gas shielded wire

Solid filler wire for arc welding;

2) The second part. indicates the code of the tensile strength of the deposited metal under the conditions of post-weld heat treatment, see Table 1;

3) The third part. indicates the type code of the protective gas, and the code of the protective gas type is in accordance with the provisions of GB/T 39255