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Replacing GB/T 3195-2016

Aluminium and aluminium alloys drawn (rolled) round wire

铝及铝合金拉(轧)制圆线材

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization -- Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB/T 3195-2016 "Aluminium and aluminium alloys drawn round wires". Compared with GB/T 3195-2016, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The conditions of designations 2A01T4, 2A04T4, 2B11T4, 2B12T4, 2A10T4, 2B16T6, 2024O, 2024H13, 2117O, 2117H13, 2219O, 2219H13, 3003O, 3003H14, 5005O, 5052O, 6061O, 6061T6, 7A03T6, 7050O, and 7050T7 for rivet wire have been deleted. The conditions of designations 5056H32, 2B16H14, 5356O, 5356H32, 7C04H18, and 7075H13 for rivet wire have been added. The diameters for rivet wire have been modified (see 4.1 of this Edition; 3.1.1.4 of Edition 2016);
- b) The conditions of designations 1350O, 1350H12, 1350H22, 1350H14, 1350H24, 1350H16, and 1350H26 for conductor wire have been deleted. The diameters for conductor wire have been modified (see 4.1 of this Edition; 3.1.1.2 of Edition 2016);
- c) The conditions of designations 2A14O, 2A14H12, 2A14H14, and 2A14H18 for welding wire have been deleted. The designations 2S19, 2319, 4047A, 4145, 4S03, 5E61, and 5B71 and their conditions, as well as conditions of designations 4A47H18 and 4A54H18 for welding wire have been added. The diameters for welding wire have been modified (see 4.1 of this Edition; 3.1.1.3 of Edition 2016);
- d) The material for cable braiding has been deleted (see 3.1.1.5 of Edition 2016);
- e) The designation of the wire used for coating has been changed. The condition of A199.999 has been added (see 4.1 of this Edition; 3.1.1.6 of Edition 2016);
- f) The requirements for chemical composition, hydrogen content, diameter deviation, room-temperature tensile mechanical properties, shear strength, riveting performance, and electrical resistivity have been modified (see Chapter 5 of this Edition; 3.2, 3.3, 3.4, 3.5, 3.7, and 3.10 of Edition 2016);
- g) The requirement for resistance to stress corrosion cracking has been deleted (see 3.11 of Edition 2016);
- h) The requirements for test methods have been revised (see Chapter 6 of this Edition; Chapter 4 of Edition 2016);
- i) The inspection items and sampling requirements have been revised (see 7.4 and

7.5 of this Edition; 5.4 and 5.5 of Edition 2016).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority shall not be held responsible for identifying any or all such patent rights.

This document was proposed by China Nonferrous Metals Industry Association.

This document shall be under the jurisdiction of National Technical Committee on Non-ferrous Metals of Standardization Administration of China (SAC/TC 243).

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Versions of standard substituted by this document are:

- It was first published as GB/T 3195-1982 in 1982; the first revision was in 1997;
- It incorporated the contents of GB/T 3196-2001 "Aluminium and aluminium alloy wires for riveting purpose" and GB/T 3197-2001 "Aluminium and aluminium alloy wires for welding purpose" during the second revision in 2008;
- The third revision was in 2016;
- This is the fourth revision.

Aluminium and aluminium alloys drawn (rolled) round wire

1 Scope

This document specifies the product classification, technical requirements, test methods, inspection rules, marks, packaging, transportation, storage, and the contents of quality certificates and purchase orders (or contracts) for aluminium and aluminium alloys drawn (rolled) round wire.

This document applies to the production and inspection of aluminum and aluminum alloy round wires (hereinafter referred to as "wires") intended for rivets, conductors, welding, and coating applications.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 238, *Metallic materials -- Wire -- Reverse bend test*

GB/T 2651, *Destructive tests on welds in metallic materials -- Transverse tensile test*

GB/T 2653, *Bend test methods on welded joints*

GB/T 3048.2, *Test methods for electrical properties of electric cables and wires -- Part 2: Test of electrical resistivity of metallic materials*

GB/T 3190, *Chemical composition of wrought aluminium and aluminium alloys*

GB/T 3199, *Packing, marking, transporting and storing of wrought aluminium and aluminium alloy products*

GB/T 3250, *Shearing and riveting test method of wires and rods for the aluminum and aluminum-alloy rivets*

GB/T 3323.1, *Non-destructive testing of welds -- Radiographic testing -- Part 1: X- and gamma-ray techniques with film*

GB/T 3880.1, *Wrought aluminium and aluminium alloy plates, sheets and strips for general engineering -- Part 1: Technical conditions of delivery*

GB/T 3880.2, *Wrought aluminium and aluminium alloy plates, sheets and strips for*