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Steel wire and wire products — Hose reinforcement wire

Fils et produits tréfilés en acier — Fil d'armature pour flexibles

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 17, *Steel wire rod and wire products*.

This second edition cancels and replaces the first edition (ISO 23717:2006), which has been technically revised.

The main changes are as follows:

— Annex A on packaging added;

— Clause 2 updated;

— Clause 3 updated;

— classification from LT to UT updated (see Clause 4);

— Cu content of coating updated (see 6.1.4);

— breaking load for mechanical properties added (see 6.2.1 and Table 1);

— product list and mechanical properties updated (see Table 1);

— cast and tip rise/dead cast requirement added (see 6.3.3 and Table 3);

— tolerance on diameter updated (see Table 4);

— welds requirement updated (see 6.5.2);

— test procedures for Cast and tip rise/dead cast and coating test added (see 7.3.4 and 7.3.5);

— labelling information for packing updated (see Table 5).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Steel wire and wire products — Hose reinforcement wire

1 Scope

This document specifies the composition, dimensions and mechanical properties of steel wire with a high mass fraction of carbon, generally brass coated, for reinforcing high-pressure hoses.

It is applicable to multiple parallel wires, braided or spirally wrapped for reinforcement in a rubber or synthetic hose that is made to withstand a relatively high bursting pressure.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 404, *Steel and steel products — General technical delivery requirements*

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 7800, *Metallic materials — Wire — Simple torsion test*

ISO 7801, *Metallic materials — Wire — Reverse bend test*

ISO 10474, *Steel and steel products — Inspection documents*

ISO 16120-1, *Non-alloy steel wire rod for conversion to wire — Part 1: General requirements*

ISO 16120-2, *Non-alloy steel wire rod for conversion to wire — Part 2: Specific requirements for general purpose wire rod*

ISO 16120-4, *Non-alloy steel wire rod for conversion to wire — Part 4: Specific requirements for wire rod for special applications*

ISO 23475-1, *Testing method for steel tyre cord — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
nominal diameter
d
value of the diameter by which the wire is designated and specified by the purchaser

Note 1 to entry: The nominal diameter is expressed in millimetres.

Note 2 to entry: This is the basis on which the values of all relevant characteristics are determined for the acceptance of the wire.