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Round steel short link chains for lifting purposes — Medium tolerance sling chains — Grade 4, stainless steel

Chaînes de levage en acier de section ronde à maillons courts — Chaînes de élingue de tolérance moyenne — Classe de qualité 4, acier inoxydable

Reference number
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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 111, *Round steel link chains, chain slings, components and accessories,* Subcommittee SC 1, *Chains and chain slings*.

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.

This second edition cancels and replaces the first edition (ISO 1835:1980), which has been technically revised. The main changes compared to the previous edition are as follows:

— change of material requirements towards stainless steel;

— modernization of the document structure and layout, following the structure already implemented in the latest publications of ISO/TC 111/SC 1;

— consideration of current nominal diameters of chain and requirements;

— environmental aspects have been considered.

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Round steel short link chains for lifting purposes — Medium tolerance sling chains — Grade 4, stainless steel

1 Scope

This document specifies the requirements for medium tolerance sling chains of grade 4 from stainless steel for use preferably in chain slings of grade 4 from stainless steel or for other lifting purposes.

The range of nominal diameter, d_n, covered by this document is from 4 mm to 22 mm.

These sling chains are round steel short link chains with a nominal pitch, $p_n = 3 \times d_n$, electrically welded, solution-annealed and tested. They are for use in the temperature range –100 °C to +400 °C. They comply with the general conditions of acceptance of ISO 1834.

NOTE 1 Because sling chains are solution-annealed in the finished condition, they can be used without restrictions with regard to the corrosion resistance of the steels according to 5.2. Higher grades of stainless steel chains are achieved by cold drawing of the wire prior to the chain manufacturing. Therefore, solution annealing is not possible without reduction of strength. The weld seam, in particular, represents a critical area with regard to the corrosion resistance.

NOTE 2 Resistance butt welding and flash welding are listed in ISO 4063.

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 1834, *Short link chain for lifting purposes — General conditions of acceptance*

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

ISO 13385-1, *Geometrical product specifications (GPS) — Dimensional measuring equipment — Part 1: Callipers; Design and metrological characteristics*

ISO 16143-2, *Stainless steels for general purposes — Part 2: Corrosion-resistant semi-finished products, bars, rods and sections*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1834 apply.

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

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

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

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