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Steel structures — Execution of structural steelwork —

Part 6: **Bolting**

Structures en acier – Exécution des charpentes et ossatures en acier —

Partie 6: Boulonnage

Reference number
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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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 167, *Steel and aluminium structures*.

This first edition cancels and replaces ISO 10721-2:1999, which has been technically revised.

A list of all parts in the ISO 17607 series can be found on the ISO website.

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.

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Introduction

Specific requirements for the achievement of structures that are optimal with respect to safety, the state of the economy, development and general values of a nation are given in the appropriate regional or national standards, if they exist.

Many nations do not have their own standards for structural steelwork. Some reference other national or regional standards. Some permit the project's standard to be selected by the owner, designer or constructor of the structure. Some do not require any standards to be followed.

The ISO 17607 series of standards on the execution of structural steelwork was developed to serve as a means to provide a set of requirements and guidance for projects that are constructed without a governing regional or national standard. The ISO 17607 series can also serve to reduce trade barriers.

Additional requirements to be addressed in the execution of structural steelwork, as structures or as fabricated components, can be found in the other parts of the series:

— ISO 17607-1 (General requirements and terms and definitions);

— ISO 17607-2 (Steels);

— ISO 17607-3 (Fabrication);

— ISO 17607-4 (Erection);

— ISO 17607-5 (Welding).

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Steel structures — Execution of structural steelwork —

Part 6: Bolting

1 Scope

This document defines the general requirements for structural bolting in the execution of structural steelwork as structures or as fabricated components, in conjunction with ISO 17607-1.

Additional requirements to be addressed in the execution of structural steelwork, as structures or as fabricated components, can be found in other parts of ISO 17607.

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 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread*

ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel – Part 2: Nuts with specified property classes – Coarse thread and fine pitch thread*

ISO 898-3, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 3: Flat washers with specified property classes*

ISO 2859-5, *Sampling procedures for inspection by attributes — Part 5: System of sequential sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 3506-1, *Mechanical properties of corrosion-resistant stainless-steel fasteners — Part 1: Bolts, screws and studs*

ISO 3506-2, *Mechanical properties of corrosion-resistant stainless-steel fasteners — Part 2: Nuts*

ISO 4014, *Hexagon head bolts - Product grades A and B*

ISO 4017, *Fasteners – Hexagon head screws – Product grades A and B*

ISO 4032, *Hexagon nuts (style 1) - Product grades A and B*

ISO 4033, *Hexagon nuts, (style 2) - Product grades A and B*

ISO 4042, *Fasteners — Electroplated coating systems*

ISO 6789-1, *Assembly tools for screws and nuts — Hand torque tools — Requirements and test methods for design conformance testing, quality conformance testing and recalibration procedure*

ISO 7089, *Plain washers — Normal series — Product grade A*

ISO 7090, *Plain washers, chamfered — Normal series — Product grade A*

ISO 7091, *Plain washers — Normal series — Product grade C*

ISO 7092, *Plain washers — Small series — Product grade A*

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ISO 7093-1, *Plain washers — Large series — Part 1: Product grade A*

ISO 7093-2, *Plain washers — Large series — Part 2: Product grade C*

ISO 7094, *Plain washers — Extra large series — Product grade C*

ISO 10683, *Fasteners — Non-electrolytically applied zinc flake coating systems*

ISO 10684, *Fasteners — Hot dip galvanized coatings*

ISO 14713-3, *Zinc coatings — Guidelines and recommendations for the protection against corrosion of iron and steel in structures — Part 3: Sherardizing*

ISO 16228, *Fasteners — Types of inspection documents*

ISO 17607-1, *Steel structures — Execution of structural steelwork — Part 1: General requirements and vocabulary*

ISO 17607-2, *Steel structures — Execution of structural steelwork — Part 2: Steels*

ISO 17607-3, *Steel structures — Execution of structural steelwork — Part 3: Fabrication*

ISO 17607-4, *Steel structures — Execution of structural steelwork — Part 4: Erection*

ISO 17607-5, *Steel structures — Execution of structural steelwork — Part 5: Welding*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17607-1 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/

4 Execution specification and quality requirements

4.1 General

See ISO 17607-1 for execution levels, identification, traceability, and quality requirements.

4.2 Execution specification

National standards and documents that provide technically equivalent conditions may be used, in whole or in part, in place of referenced ISO standards or requirements of this document. In these cases, the technically equivalent national standards and documents, and deviations from the requirements of this document, shall be referenced in the execution specification.

The necessary information and technical requirements for execution of structural bolting shall be agreed on and complete before commencement.

The execution specification shall include the following items (see Annex A) as relevant:

a) required additional information, see A.1;

b) options that may be specified, see A.2;

c) quality requirements related to execution levels, see A.3.

There shall be procedures for making alterations to a previously agreed execution specification.

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