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Steels for the reinforcement and prestressing of concrete — Certification scheme for steel bars and wires

Aciers pour l'armature et la précontrainte du béton — Système particulier de certification des barres et fils d'acier

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Contents

Page

Foreword ..... **iv**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Initial product and process evaluation **2**
4.1 General 2
4.2 Purpose 2
4.3 Organization 2
4.4 Procedure 2
4.4.1 General 2
4.4.2 Assessment of the production conditions 2
4.4.3 Sampling and testing of specimens 3
4.4.4 Certification decision and attestation 3
4.4.5 Verification of the long-term quality level 3

5 Internal inspection by the manufacturer **4**
5.1 Purpose 4
5.2 Procedure 4
5.2.1 Conformance testing 4
5.2.2 Determination of the long-term quality level 5

6 Surveillance **6**
6.1 Organization 6
6.2 Purpose 6
6.3 Procedure 6
6.4 Evaluation 6

7 Conformity documents **7**

Bibliography **8**

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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).

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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 ISO/TC 17, *Steel*, Subcommittee SC 16, *Steels for the reinforcement and prestressing of concrete*.

This second edition cancels and replaces the first edition (ISO 10144:1991), which has been technically revised.

The following changes have been made:

— the references to ISO/IEC standards have been updated;

— the scheme stages have been aligned with modern certification criteria;

— the sampling criteria have been clarified.

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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Steels for the reinforcement and prestressing of concrete — Certification scheme for steel bars and wires

1 Scope

This document specifies rules for a certification scheme for continuous production of steel bars, rods and wires for the reinforcement of concrete structures in order to verify conformity with requirements specified in product standards, such as ISO 6935-1 and ISO 6935-2.

It includes requirements for the production process and management system assessment activities.

A product certification scheme for continuous production consists of the following stages:

— initial evaluation;

— review of evidence of conformity;

— certification decision and attestation;

— surveillance activities.

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/IEC 17065, *Conformity assessment — Requirements for bodies certifying products, processes and services*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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/

3.1
certification scheme
certification system as related to specified products, processes or services to which the same particular standards and rules, and the same procedure, apply

3.2
certification body
body that conducts certification of conformity

3.3
characteristic value
value having a prescribed probability of not being attained in a hypothetical unlimited test series

[SOURCE: ISO 16020:2005, 2.4.10, modified — the note has been deleted.]

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3.4
inspection
examination of a product design, product, process or installation and determination of its conformity with specific requirements or, on the basis of professional judgement, with general requirements

Note 1 to entry: Inspection of a process may include inspection of persons, facilities, technology and methodology.

[SOURCE: ISO/IEC 17000:2004, 4.3]

4 Initial product and process evaluation

4.1 General

A signed certification agreement should be concluded before commencing the certification process, covering the product range requiring certification.

4.2 Purpose

The purpose of product evaluation is to ensure that the manufacturer has the capability and resources to produce reinforcing steels in accordance with the requirements specified in the product standards.

4.3 Organization

The certification body provides assessment and impartial third-party attestation that the specified requirements have been achieved. Product certification shall be conducted by certification bodies meeting the requirements of ISO/IEC 17065.

4.4 Procedure

4.4.1 General

Evaluation consists of the following stages:

— assessment of conditions for production (4.4.2);

— sampling and testing of specimens (4.4.3);

— calculation and verification of the long-term quality level (4.4.5).

If satisfactory results are not achieved in one stage, all the stages shall be repeated. Evaluation applies separately for each steel grade and each production method. If a steel grade is produced by various production processes, evaluation shall be conducted to its full extent for each of these processes.

4.4.2 Assessment of the production conditions

Assessment of the production conditions shall include the following:

— the competence of the personnel and satisfactory organization of the production processes;

— the adequacy of the equipment for production including effective process control;

— the independence of the department responsible for quality assurance from the production department;

— the suitability of the test equipment for internal testing;

— the ability of the manufacturer's quality system to ensure the quality of the products. A quality system such as ISO 9001 or similar is considered satisfactory if it meets the requirements of the applicable product standard.

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