

INTERNATIONAL STANDARD

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Cold-reduced steel wire for the reinforcement of concrete and the manufacture of welded fabric

*Fils en acier à béton transformés à froid pour armatures passives et la
fabrication des treillis soudés*



Reference number
ISO 10544:1992(E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 10544 was prepared by Technical Committee ISO/TC 17, *Steel*, Sub-Committee SC 16, *Steels for the reinforcement and prestressing of concrete*.

Annexes A and B of this International Standard are for information only.

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Cold-reduced steel wire for the reinforcement of concrete and the manufacture of welded fabric

1 Scope

This International Standard specifies technical requirements for cold-reduced steel wire designed for the reinforcement of concrete or for use in welded fabric.

One steel grade, 500 N/mm², is defined.

This International Standard applies to wire made from rod by working through dies or rollers. The production process is at the discretion of the manufacturer.

For wire supplied in coil form, the requirements of this International Standard apply to the straightened product.

Wires produced from finished products, such as plates and railway rails, are excluded.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 404:1992, *Steel and steel products — General technical delivery requirements*.

ISO 6892:1984, *Metallic materials — Tensile testing*.

ISO/TR 9769:1991, *Steel and iron — Review of available methods of analysis*.

ISO 10065:1990, *Steel bars for reinforcement of concrete — Bend and rebend tests*.

ISO 10144:1991, *Certification scheme for steel bars and wires for the reinforcement of concrete structures*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 cas analysis: Chemical analysis of a sample of the molten steel during casting.

3.2 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. [ISO/IEC Guide 2]

3.3 characteristic value: Value having a prescribed probability of not being attained in a hypothetical unlimited test series. [ISO 8930]

NOTE 1 Equivalent to fractile, which is defined in ISO 3534.

3.4 core: The part of cross-section of the wire that contains neither ribs nor indentations.

3.5 inclination of indentation, β : The angle between the indentation and the longitudinal axis of the wire. (See figure 2.)

3.6 indentation spacing, c : The distance between the centres of two consecutive indentations measured parallel to the axis of the wire. (See figure 2.)

3.7 indented wire: Wire with a regular pattern of surface indentations to enhance its bond properties.

3.8 inspection: Activities such as measuring, examining, testing, gauging one or more characteristics of a product or service and comparing these with specified requirements to determine conformity. [ISO 8402]