INTERNATIONAL STANDARD

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Round non-alloy steel wires for locked coil mine winding ropes — Specifications

Fils tréfilés ronds en acier non allié pour câbles clos d'extraction minière — Spécifications

Reference number
ISO 9975:1990(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 9975 was prepared by Technical Committee ISO/TC 105, *Steel wire ropes*.

Annexes A and B form an integral part of this International Standard. Annex C is for information only.

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Round non-alloy steel wires for locked coil mine winding ropes — Specifications

1 Scope

This International Standard specifies round non-alloy steel drawn wires to be used in the manufacture of locked coil mine winding ropes as defined in ISO 5614. It specifies

— the dimensional tolerances;

— the mechanical characteristics;

— the conditions with which coatings, if any, shall comply;

— the conditions of sampling and control.

It applies to round, bright or zinc-coated wires of quality B and of nominal diameters between 1 mm and 3,5 mm.

It does not apply to steel wire taken from manufactured ropes.

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 5614:1988, *Locked coil wire ropes for mine hoisting — Technical delivery requirements.*

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

ISO 7800:1984, *Metallic materials — Wire — Simple torsion test.*

ISO 7801:1984, *Metallic materials — Wire — Reverse bend test.*

ISO 7802:1983, *Metallic materials — Wire — Wrapping test.*

3 Wire characteristics

3.1 General conditions of manufacture

Wire shall be made by the basic open hearth, electric furnace, or basic oxygen steel process, or by equivalent methods.

The finished wires shall not show superficial or internal defects detrimental to their use.

When specified, the wires shall be supplied with a zinc coating applied by the hot-dip or the electrolytic process. For the former case, the zinc used shall be 99,9 % pure.

3.2 Diameter

3.2.1 Nominal diameter, d

The nominal diameter of the wire, in millimetres, is that by which the wire is designated. It shall be the basis on which the values of all characteristics are determined for acceptance of the wire.

3.2.2 Actual diameter

The actual diameter of the wire is the arithmetic mean of two measurements carried out in accordance with 5.1. It shall be within the limits of tolerance specified in table 1.

3.2.3 Ovality of the wire

The arithmetic difference between the two measurements of the diameter shall be not more than half the tolerance specified in table 1.