

## ANSI Internat Doc Sect

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### Mining — Scraper bars for chain conveyors

*Exploitation minière — Raclettes pour convoyeurs à chaînes*



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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.

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 5612 was prepared by Technical Committee ISO/TC 82, *Mining*.

This second edition cancels and replaces the first edition (ISO 5612 : 1984), of which it constitutes a minor revision. All references to ISO/R 147 have been replaced by a reference to ISO 7500-1.

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# Mining — Scraper bars for chain conveyors

## 1 Scope

This International Standard specifies the requirements for a range of scraper bars for use in twin outboard chain assemblies made from chains complying with ISO 610 and associated shackle type connectors complying with ISO 1082. The range of scraper bars specified is intended for use with chains of diameter 14, 18, 22, 24 and 26 mm in a selected range of chain centres and clamped tight within the shackle type connectors.

This International Standard is not intended to indicate a complete design, but gives sufficient detail to ensure dimensional compatibility with the associated chains and connectors. Dimensions of section ends of the scraper bars necessary for compatibility between scraper bars and connectors are specified. The centre sections of the scraper bars may be of any design and shape, within the range of dimensions given in table 1 for the appropriate chain centres. Other dimensions may be subject to national standards or agreement between the purchaser and the manufacturer.

As a guide to the selection of scraper bars for specific applications, scraper bars are rated by determining the force at which a specified minimum deflection is attained, when the bar is subjected to a three-point bend test. The bars can be classified as "light", "medium" or "heavy", according to their strength ratings.

## 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 610 : 1990, *High-tensile steel chains (round link) for chain conveyors and coal ploughs*.

ISO 1082 : 1990, *Mining — Shackle type connector units for chain conveyors*.

ISO 7500-1 : 1986, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tensile testing machines*.

## 3 Definitions

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

**3.1 twin outboard chain assembly:** Pairs of chains to which scraper bars are coupled by means of shackle type connectors.

**3.2 nominal chain centres:** The distance between the centres of the chains in the assembly.

**3.3 force-deflection test:** A test to determine the ability of a scraper bar to sustain a minimum deflection and the strength rating.

**3.4 minimum deflection:** The deflection that a scraper bar is required to sustain without fracture.

**3.5 strength rating:** The force required to produce a central deflection in the scraper bar, equal to 10 % of the nominal chain centres of the assembly.

**3.6 inspector:** The representative of the purchaser.

## 4 Material

It shall be the responsibility of the manufacturer to select the steel so that the finished scraper bars, suitably heat-treated, where appropriate, meet the specified mechanical properties.

## 5 Heat treatment

Any heat treatment shall be the responsibility of the manufacturer.

## 6 Dimensions

Scraper bars shall comply with the dimensions specified in table 1 and illustrated in figures 1 and 2. The centre sections of the scraper bars may be of any design and shape, within the range of dimensions given in table 1 for the appropriate chain centres.