

International Standard



610

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

High-tensile steel chains (round link) for chain conveyors and coal ploughs

Chaînes en acier à haute résistance à la traction (à maillons ronds) pour convoyeurs à chaîne et rabots à charbon

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 610 was developed by Technical Committee ISO/TC 82, *Mining*, and was circulated to the member bodies in March 1978.

It has been approved by the member bodies of the following countries :

Austria	India	South Africa, Rep. of
Belgium	Iran	Sweden
Bulgaria	Italy	Turkey
Czechoslovakia	Mexico	United Kingdom
France	New Zealand	USSR
Germany, F.R.	Poland	

The member body of the following country expressed disapproval of the document on technical grounds :

Australia

This International Standard cancels and replaces ISO Recommendation R 610-1967, of which it constitutes a technical revision.



TC 82

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ERRATUM

Page 1

Top of page: "Draft International Standard" should read "International Standard".

Page 7

Replace figure 3 by the new figure given below. The dimension d should refer to the maximum width of the cross-hatched part of the hardened steel insert and not the maximum width of the insert.

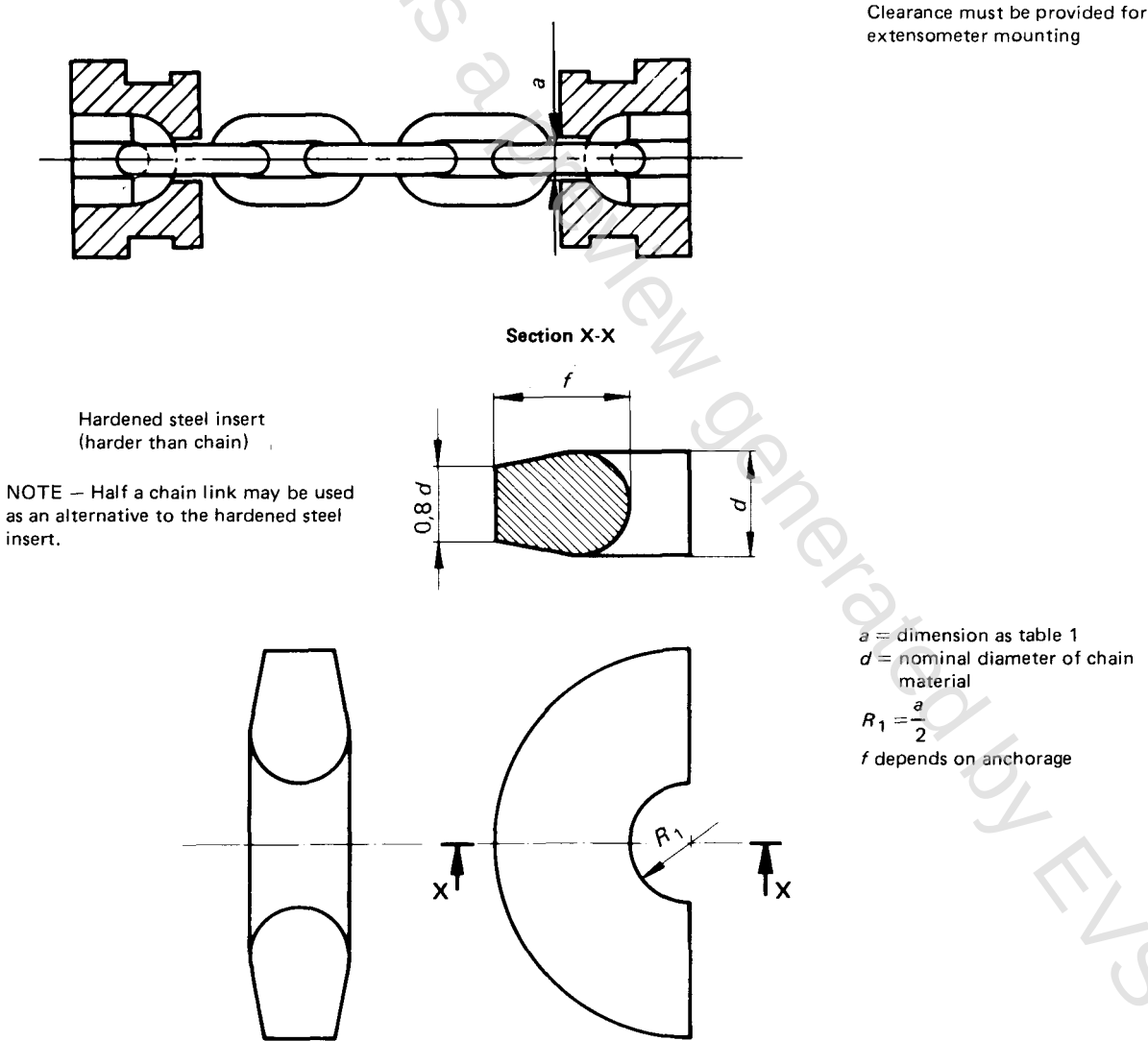


FIGURE 3 — Chain anchorage for static tensile test

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High-tensile steel chains (round link) for chain conveyors and coal ploughs

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the requirements for a range of high grade special purpose calibrated, high-tensile, electrically welded, steel chains (round link) for use with machines and equipment in mining, such as the following :

- a) conveyors, flexible and rigid, of the chain type, chain belt conveyors, gate end and stage loaders;
- b) coal ploughs, coal cutters and power loaders;
- c) bucket elevators;
- d) other similar machines used in mines.

This International Standard covers a size range from 14 to 30 mm. Three grades of quality (B, C and D) are specified with regard to the mechanical properties of chain. The values given for grade D in tables 3, 4, 7 and 8 are, however, provisional.

Chains covered by this International Standard are not designed for lifting appliances, such as cranes and slings.

2 REFERENCES

ISO 83, *Steel - Charpy impact test (U-notch)*.

ISO/R 147, *Load calibration of testing machines for tensile testing of steel*.

ISO/R 643, *Micrographic determination of the austenitic grain size of steels*.

3 DEFINITIONS

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

3.1 size of chain : The nominal diameter d of the steel wire or bar from which the chain is made.

3.2 breaking force : The maximum force which a sample of finished chain withstands during the course of a tensile test to destruction.

3.3 test force : The specified force to which a sample of the finished chain has to be subjected without exceeding the stated elongation.

3.4 proof force : The specified force to which, after processing (see 3.6), the whole of the chain has to be subjected without significant permanent deformation or damage.

This force may be re-applied to the whole of the new chain or to any part thereof by the purchaser or by his inspector at their discretion.

3.5 percentage elongation : The extension expressed as a percentage of the gauge length.

3.6 processing : Any treatment of the chain subsequent to welding, for example heat treatment, calibration or surface treatment.

3.7 calibration : The application of force to the whole of the chain during the production process to control the link dimensions.