International Standard 5613

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Mining — Drive sprocket assemblies for chain conveyors

Exploitation minière — Tourteaux d'entraînement à empreintes 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 developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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 5613 was developed by Technical Committee ISO/TC 82, *Mining*, and was circulated to the member bodies in October 1982.

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

Australia	Egypt, Arab Rep. of	Poland
Austria	France	Romania
Belgium	Germany, F.R.	Spain
Brazil	India	United Kingdom
Bulgaria	Korea, Dem. P. Rep. of	USSR
China	Mexico	
Czechoslovakia	New Zealand	

No member body expressed disapproval of the document.

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Mining — Drive sprocket assemblies for chain conveyors

1 Scope and field of application

This International Standard specifies the requirements for a range of sprocket assemblies for use with twin outboard chain assemblies for chain conveyors. These assemblies incorporate sprocket rings designed to accept chains complying with ISO 610, shackle type connectors complying with ISO 1082 and scraper bars complying with ISO 5612.

2 References

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

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

ISO 5612, *Mining — Scraper bars for chain conveyors.*

3 Definitions

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

3.1 drive sprocket assembly: An arrangement which comprises the drive sprocket rings and connecting barrel, shown in figure 1, or a barrel incorporating integral drive sprocket rings.

3.2 drive sprocket ring: A toothed wheel by which the chain of a chain conveyor is driven.

3.3 connecting barrel: A cylindrical spacer between two drive sprocket rings.

3.4 sprocket pocket: That part of a complete sprocket ring into which either a chain link or shackle type connector sits.

3.5 inspector: The representative of the purchaser.

4 Drive sprocket assembly

4.1 Design

Drive sprocket assemblies as shown in figure 1 shall conform to the dimensions and tolerances stated in tables 1 and 2 which are based on the design formulae given in the annex. Unless otherwise specified by the purchaser and having regard to these limitations, it is the manufacturer's responsibility to ensure that the assembly and its components shall be of adequate strength for the duty which they are required to perform, when related to the dimensions and mechanical properties of the appropriate chain (see ISO 610).

4.2 Assembly

When constructing the drive sprocket assembly shown in figure 1, the profiles of each complete sprocket ring shall be aligned with the other within the permitted tolerances stated in 5.1. Where applicable, care shall be taken to adopt the correct welding procedure for the steels used for the sprocket rings and the barrel.

4.3 Dimensional tests

The dimensions for each sprocket assembly given in table 2 shall be verified by methods agreed between the purchaser and the manufacturer.

NOTE — An associated guidance document on methods of verifying sprocket dimensions is being prepared.

4.4 Workmanship

Where applicable, all welds shall be smoothly finished, and on visual examination, have no harmful fissures, notches or other imperfections.

Magnetic and/or fluorescent crack deflection, gamma radiography or other forms of non-destructive testing shall be specified only by agreement between purchaser and manufacturer. Such methods of testing and the criteria to be applied shall be clearly defined and agreed at the time of the enquiry and order.

4.5 Marking

Each sprocket assembly shall be visibly and permanently marked with

a) the manufacturer's registered trade name or trade mark;

b) the size and pitch of chain and the chain centres (see table 1);

c) any other marking as agreed between the purchaser and the manufacturer.