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**INTERNATIONAL STANDARD****2149**

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## **Continuous mechanical handling equipment for unit loads — Overhead monorail chain conveyors — Safety code**

*Engins de manutention continue pour charges isolées — Convoyeurs aériens à simple voie — Code de sécurité*

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**Descriptors :** handling equipment, continuous handling, unit loads, conveyors, chain conveyors, safety requirements.

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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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 101 has reviewed ISO Recommendation R 2149 and found it technically suitable for transformation. International Standard ISO 2149 therefore replaces ISO Recommendation R 2149-1971 to which it is technically identical.

ISO Recommendation R 2149 was approved by the Member Bodies of the following countries :

Australia	India	Spain
Austria	Ireland	Sweden
Belgium	Japan	Thailand
Czechoslovakia	Korea, Rep. of	United Kingdom
Egypt, Arab Rep. of	Netherlands	U.S.A.
France	New Zealand	U.S.S.R.
Germany	South Africa, Rep. of	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 2149 into an International Standard.

# Continuous mechanical handling equipment for unit loads – Overhead monorail chain conveyors – Safety code

## 1 SCOPE

This International Standard specifies, in addition to the general safety rules set out in ISO/R 1819, the special safety rules for the following continuous mechanical handling equipment for unit loads: overhead monorail chain conveyors.

## 2 FIELD OF APPLICATION

The safety rules laid down in this International Standard apply regardless of the use for which the equipment is intended.

These safety rules limit the supplier's responsibility to continuous mechanical handling equipment proper, excluding the structures to which such equipment is affixed.

## 3 REFERENCE

ISO/R 1819, *Continuous mechanical handling equipment – Safety code – General rules*.

## 4 SPECIAL SAFETY RULES

The construction and operation for overhead monorail chain conveyors shall meet

- the legal and local requirements relating to safety in general <sup>1)</sup>;
- the principles laid down in clause 1 of ISO/R 1819;
- the general rules laid down in clause 2 of ISO/R 1819;
- the following special rules:

### 4.1 In the construction stage (design and manufacture)

**4.1.1** All traction mechanism drives shall be equipped with load limiters (with or without motor cut-out), i.e.

independently of the thermal cut-out devices of the electrical switchgear.

If several drives operate in one group, the entire group shall be cut out when the load limiter of one drive responds.

**4.1.2** Load carriers and hangers must be connected to the traversing gear and the traction equipment in such a way that they cannot become detached by themselves.

**4.2 During the installation stage** (design, commissioning and entry into service)

**4.2.1** Chain or roller tracks shall be guarded in zones which are accessible to personnel under normal working conditions.

**4.2.2** In addition to rule 2.2.9 of ISO/R 1819, attention shall be drawn by a visual signal at all authorized passages to the danger of a possible collision with a moving load.

**4.2.3** Where the track is inclined, measures shall be taken to prevent both the loads and the carriers becoming uncontrollable.

**4.3 During the utilisation stage** (operation and maintenance)

**4.3.1** The maximum rated capacity (safe working load) for the equipment shall be displayed in easily visible positions.

Notices shall also, if necessary, be displayed to provide operating personnel with instructions on the type of loading and equilibrium of the load carriers.

**4.3.2** It is strictly forbidden to lean or place any component (ladder, plank, etc.) on the chain or roller tracks, except for the supervisory and maintenance personnel. These personnel will take all customary precautions, and especially render the conveyor inoperative.

1) See appendix Z of ISO/R 1819.