
INTERNATIONAL STANDARD



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Continuous mechanical handling equipment for loose bulk materials – Storage equipment fed by a pneumatic handling system – Safety code

Engins de manutention continue pour produits en vrac – Équipements de stockage alimentés par manutention pneumatique – Code de sécurité

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Descriptors : handling equipment, continuous handling, bulk products, pneumatic equipment, storage equipment, safety requirements.

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 5029 was developed by Technical Committee ISO/TC 101, *Continuous mechanical handling equipment*, and was circulated to the member bodies in February 1976.

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

| | | |
|----------------|-----------------------|----------------|
| Australia | Germany | Spain |
| Austria | India | Sweden |
| Belgium | Japan | Turkey |
| Bulgaria | Mexico | United Kingdom |
| Chile | Netherlands | U.S.S.R. |
| Czechoslovakia | Poland | Yugoslavia |
| Finland | Romania | |
| France | South Africa, Rep. of | |

No member body expressed disapproval of the document.

Continuous mechanical handling equipment for loose bulk materials – Storage equipment fed by a pneumatic handling system – Safety code

1 SCOPE

This International Standard specifies, in addition to the general safety rules set out in ISO 1819, the special safety rules for storage equipment for loose bulk materials fed by a pneumatic handling system.

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 properly so called, excluding the structures to which such equipment is fixed.

3 REFERENCES

ISO 1819, *Continuous mechanical handling equipment – Safety code – General rules*.¹⁾

ISO 5028, *Continuous mechanical handling equipment for loose bulk materials – Pneumatic handling installations – Safety code*.

4 SPECIAL SAFETY RULES

The construction and operation of storage equipment for loose bulk materials fed by a pneumatic handling system shall meet

- the legal and local requirements relating to safety in general (see appendix Z of ISO 1819);
- the design rules for containers under pressure not submitted to the action of flame;²⁾

- the principles laid down in clause 1 of ISO 1819;
- the general rules laid down in clause 2 of ISO 1819 and in ISO 5028;
- the following special rules.

4.1 In the construction stage (design and manufacture)

4.1.1 Bins, bunkers, silos and hoppers

4.1.1.1 The components must be so designed as not only to carry the stipulated loads (dead weights, stored material, ancillary superstructures, occasional overloads, etc. and if necessary climatic overloads) but also to withstand the maximum permissible pressure or vacuum.

4.1.1.2 When feeding is by blowing, if the permissible pressure in the storage receptacles is lower than the maximum pressure which may be supplied by the installation, the components should be equipped with appropriate devices allowing the rapid discharge of the whole of the conveying air when the pressure rises to a value which is higher than the permissible pressure.

4.1.1.3 When feeding is by suction, if the permissible vacuum in the storage receptacles is less than the maximum possible vacuum which may be created by the installation, the components shall be equipped accordingly so as to prevent the increase of the vacuum beyond the permissible limit.

4.1.1.4 Stability under all load conditions must be ensured.

1) At present at the stage of draft. (Revision of ISO/R 1819-1970.)

2) See the corresponding national regulations.