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STANDARD

5049-1

Second edition
1994-07-01

ANSI Internat Doc Sec

**Mobile equipment for continuous handling
of bulk materials —**

Part 1:

Rules for the design of steel structures

*Appareils mobiles de manutention continue pour produits en vrac —
Partie 1: Règles pour le calcul des charpentes en acier*



Reference number
ISO 5049-1:1994(E)

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

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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 5049-1 was prepared by Technical Committee ISO/TC 101, *Continuous mechanical handling equipment*.

This second edition cancels and replaces the first edition (ISO 5049-1:1980), of which it constitutes a technical revision.

ISO 5049 consists of the following parts, under the general title *Mobile equipment for continuous handling of bulk materials*:

- *Part 1: Rules for the design of steel structures*
- *Part 2: Rules for the design of machinery*

Annex A of this part of ISO 5049 is for information only.

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Mobile equipment for continuous handling of bulk materials —

Part 1:

Rules for the design of steel structures

1 Scope

This part of ISO 5049 establishes rules for determining the loads, types and combinations of loads (main, additional and special loads) which must be taken into account when designing steel structures for mobile continuous bulk handling equipment.

This part of ISO 5049 is applicable to rail-mounted mobile equipment for continuous handling of bulk materials, especially to

- stackers,
 - shiploaders,
 - reclaimers,
 - combined stackers and reclaimers,
 - continuous ship unloaders.
- } equipment fitted with bucket wheels or bucket chains

For other equipment, such as

- excavators,
- scrapers,
- reclaimers with scraper chain,
- mixed tyre or caterpillar-mounted stackers and reclaimers,

the clauses in this International Standard as adapted to each type of apparatus are applicable.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 5049. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 5049 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 286-2:1988, *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts.*

ISO 630:1980, *Structural steels.*

ISO 2148:1974, *Continuous handling equipment — Nomenclature.*

ISO 5048:1989, *Continuous mechanical handling equipment — Belt conveyors with carrying idlers — Calculation of operating power and tensile forces.*

3 Loads

Depending on their frequency, the loads are divided into three different load groups: main loads, additional loads and special loads.

- a) The main loads comprise all the permanent loads which occur when the equipment is used under normal operating conditions.