



SLOVENSKI STANDARD
SIST EN 23449:2000
01-december-2000

Earth-moving machinery - Falling-object protective structures - Laboratory tests and performance requirements (ISO 3449:1984, ed. 3)

Earth-moving machinery - Falling-object protective structures - Laboratory tests and performance requirements (ISO 3449:1984, ed. 3)

Erdbaumaschinen - Schutzaufbauten gegen herabfallende Gegenstände - Prüfungen und Anforderungen (ISO 3449:1984, Ausg. 3)

Engins de terrassement - Structures de protection contre les chutes d'objets - Essais de laboratoire et criteres de performance (ISO 3449:1984, éd. 3)

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Ta slovenski standard je istoveten z: EN 23449:1988

ICS:

53.100 Stroji za zemeljska dela Earth-moving machinery

SIST EN 23449:2000 **en**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPAISCHE NORM

EN 23449

March 1988

UDC 621.878/.879:62-78:620.1

Key words : Earth-moving equipment, Accident prevention, Protection against falling objects, Laboratory tests, Drop tests.

English version

**Earth-moving machinery;
 Falling-object protective structures;
 Laboratory tests and performance requirements**
 (ISO 3449-1984, 3rd edition)

Engins de terrassement;
 Structures de protection
 contre les chutes d'objets;
 Essais de laboratoire et
 critères de performance
 (ISO 3449-1984, 3ième édition)

Erdbaumaschinen;
 Schutzaufbauten gegen herab-
 fallende Gegenstände;
 Prüfungen und Anforderungen
 (ISO 3449-1984, 3. Ausgabe)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Central Secretariat or to any CEN member.

This European Standard exists in the official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to CEN Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
 Comité Européen de Normalisation
 Europäisches Komitee für Normung

Central Secretariat : Rue Bréderode 2, B-1000 Brussels

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Ref.No. EN 23449:1988 E

BRIEF HISTORY

Following a proposal of the Commission of the European Communities, the Technical Coordination Committee of CEN decided in 1980 to investigate the national implementation of ISO Standards in the field of "Health and safety standards for cabin installation of construction equipment".

Based on the result of the study, the Technical Board decided in 1985 to submit

ISO 3449-1984 "Earth-moving machinery; Falling-object protective structures; Laboratory tests and performance requirements"

to the FORMAL VOTE. The result was positif

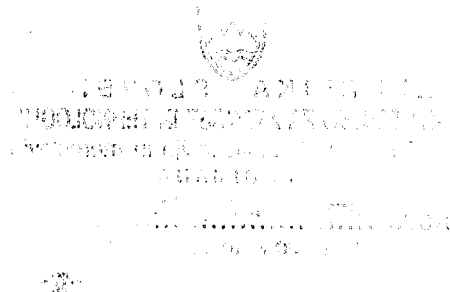
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STATEMENT

The text of the International Standard ISO 3449-1984, 3rd edition, was approved by CEN as a European Standard without any modification.



INTERNATIONAL STANDARD

ISO
3449

Fourth edition
1992-05-15

Earth-moving machinery — Falling-object protective structures — Laboratory tests and performance requirements

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*Engins de terrassement — Structures de protection contre les chutes
d'objets — Essais de laboratoire et critères de performance*

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Reference number
ISO 3449:1992(E)

ISO 3449:1992(E)

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 3449 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Sub-Committee SC 2, *Safety requirements and human factors*.

This fourth edition cancels and replaces the third edition (ISO 3449:1984), of which it constitutes a technical revision.

Annexes A and B form an integral part of this International Standard.

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International Organization for Standardization

Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Introduction

This International Standard provides performance criteria for falling object protective structures (FOPS). It recognizes that there are various classes and sizes of machines that operate in a variety of environmental conditions. Therefore, two levels of acceptance criteria are provided based upon end use. It is intended to assure operators of reasonable protection from falling objects of different sizes and masses under the conditions stated in 4.4.

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Earth-moving machinery — Falling-object protective structures — Laboratory tests and performance requirements

1 Scope

1.1 This International Standard specifies

- a) the laboratory tests for measurement of structural characteristics, and
- b) the performance requirements in a representative test, of a falling-object protective structure (FOPS).

1.2 The laboratory tests are a means of testing the characteristics of the structures used to protect the operator from localized impact penetration and, indirectly, of the load-carrying capacity of the supporting structure to resist impact loading.

1.3 This International Standard establishes a consistent, repeatable means of evaluating characteristics of FOPS under loading and prescribes performance requirements for these structures under such loading in a representative test.

NOTE 1 For the purposes of this International Standard, "representative test" means a test of a specimen whose material, dimensional, and processing requirements are typical of those FOPS currently being produced.

1.4 This International Standard applies to the following types of operator-controlled machines, regardless of the type of steering system used, as defined in ISO 6165:

- crawler loaders, wheel loaders and backhoe loaders;
- crawler tractors and wheel tractors;
- graders;
- tractor-scrappers.

1.5 This International Standard does not apply to

- self-propelled compactors;
- drills;
- paving machines;
- machines having a power rating less than 15 kW (20 hp);
- belt loaders;
- excavators;
- cranes;
- drag lines.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard 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 148:1983, *Steel — Charpy impact test (V-notch)*.

ISO 898-1:1988, *Mechanical properties of fasteners — Part 1: Bolts, screws and studs*.

ISO 898-2:—¹⁾, *Mechanical properties of fasteners — Part 2: Nuts with specified proof load values — Coarse thread*.

1) To be published. (Revision of ISO 898-2:1980)