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**Cranes — Access, guards and restraints —**

**Part 1:  
General**

*Appareils de levage à charge suspendue — Moyens d'accès, dispositifs de protection et de retenue —*

*Partie 1: Généralités*



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 11660-1 was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 7, *Tower cranes*.

ISO 11660 consists of the following parts, under the general title *Cranes — Access, guards and restraints*:

- *Part 1: General*
- *Part 2: Mobile cranes*
- *Part 3: Tower cranes*
- *Part 4: Jib cranes*
- *Part 5: Overhead travelling cranes and portal bridge cranes*



# Cranes — Access, guards and restraints —

## Part 1: General

### 1 Scope

This part of ISO 11660 establishes the general requirements for access to control stations and other areas of cranes, as defined in ISO 4306-1, during normal operation, maintenance, inspection, erection and dismantling. Guards and restraints are also dealt with in general, regarding the protection of persons on or near the crane as related to moving parts, falling objects or live parts.

The particular requirements relating to access, guards and restraints for the various types of cranes and lifting appliances are given in the other parts of ISO 11660.

In some cases, the particular requirements may not comply with the general requirements. Different dimensions are allowed provided an equivalent degree of protection is achieved.

### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 11660. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 11660 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 4306-1, *Cranes — Vocabulary — Part 1: General*.

IEC 60204-32, *Electrical equipment of industrial machines — Part 32: Requirements for hoisting machines*.

### 3 Terms and definitions

For the purposes of this part of ISO 11660, the terms and definitions given in ISO 4306-1 and the following apply.

#### 3.1 ladder

access system or part of an access system, inclined from the horizontal at an angle greater than 50° but not more than 90°, consisting of a series of equally spaced steps that can accommodate one or both feet

##### 3.1.1 rung ladder

ladder consisting of side rails and rungs which can accommodate both feet, used where the angle of inclination from the horizontal exceeds 75°