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STANDARD

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**Cranes — Limiting and indicating  
devices —**

**Part 5:**

Overhead travelling and portal bridge cranes

*Appareils de levage à charge suspendue — Dispositifs limiteurs et  
indicateurs —*

*Partie 5: Ponts roulants et ponts portiques*



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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 10245-5 was prepared by Technical Committee ISO/TC 96, *Cranes*, Subcommittee SC 9, *Bridge and gantry cranes*.

ISO 10245 consists of the following parts, under the general title *Cranes — Limiting and indicating devices*:

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

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# Cranes — Limiting and indicating devices —

## Part 5:

### Overhead travelling and portal bridge cranes

#### 1 Scope

This part of ISO 10245 specifies the requirements for devices which limit and/or indicate the loads, motions, performance and environment of bridge and gantry cranes. The general requirements for limiting and indicating devices for cranes are given in ISO 10245-1.

#### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 10245. 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 10245 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 4306-1:1990, *Cranes — Vocabulary — Part 1: General*.

ISO 8686-1:1989, *Cranes — Design principles for loads and load combinations — Part 1: General*.

ISO 10245-1:1994, *Cranes — Limiting and indicating devices — Part 1: General*.

#### 3 Definitions

For the purposes of this part of ISO 10245, the definitions given in ISO 10245-1 apply.

#### 4 Rated capacity limiter

**4.1** Cranes shall be fitted with a rated capacity limiter, if

- there is a hazard of overturning;
- the crane is likely to handle unpredictable loads, which can result in overloading of the mechanisms and structures.

**4.2** The rated capacity limiter shall allow the rated load and lifting devices to be accelerated upwards with the design mean acceleration  $a$ . Normally the limiter can be adjusted and blocked to the appropriate value during tests with the rated load. For serially manufactured hoisting winches, it may be adequate to set the rated capacity limiter during workshop tests, taking into account provisions for elasticity of the bridges on which the winches are being used.

**4.3** It may be necessary to fit a system to the limiter to prevent it from sensing dynamic loads during operation.

**4.4** The rated capacity limit setting  $Q_L$  shall meet the following ratios:

$$1 + \frac{a}{g} < \frac{Q_L}{Q_{GL}} < \varphi_2$$

where

- $a$  is the design mean acceleration for hoisting;
- $g$  is the acceleration due to gravity;
- $Q_L$  is the rated capacity limit setting for the hoist medium (rope, chain, etc.);