

SLOVENSKI STANDARD SIST ISO 8566-1:2012

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Žerjavi - Kabine in kontrolne postaje - 1. del: Splošno

Cranes - Cabins and control stations - Part 1: General

Appareils de levage à charge suspendue. Cabines et postes de conduite - Partie 1: Généralités

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INTERNATIONAL STANDARD

ISO 8566-1

Second edition 2010-02-01

Cranes — Cabins and control stations —

Part 1: **General**

Appareils de levage à charge suspendue — Cabines et postes de conduite —

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ISO 8566-1:2010(E)

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Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 8566-1 was prepared by Technical Committee ISO/TC 96, Cranes, Subcommittee SC 7, Tower cranes.

This second edition cancels and replaces the first edition (ISO 8566-1:1992), which has been technically revised.

ISO 8566 consists of the following parts, under the general title *Cranes* — *Cabins and control stations*:

- SIST ISO 8566-1:2012
 - Part 1: General https://standards.iteh.ai/catalog/standards/sist/016172d0-5ee3-48f7-85e8e645226472a0/sist-iso-8566-1-2012
- 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 — Cabins and control stations —

Part 1:

General

1 Scope

This part of ISO 8566 specifies the general requirements for cabins and control stations from which cranes, as defined in ISO 4306-1, are operated.

It takes the conditions of use of the cabin into consideration.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies 10.110.

ISO 3795, Road vehicles, and tractors and machinery for agriculture and forestry — Determination of burning behaviour of interior materials and ards/sist/016172d0-5ee3-48f7-85e8-

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

ISO 5353:1995, Earth-moving machinery, and tractors and machinery for agriculture and forestry — Seat index point

ISO 7752-1, Cranes — Controls — Layout and characteristics — Part 1: General principles

ISO 11112, Earth-moving machinery — Operator's seat — Dimensions and requirements

ISO 11201, Acoustics — Noise emitted by machinery and equipment — Measurement of emission sound pressure levels at a work station and at other specified positions — Engineering method in an essentially free field over a reflecting plane

IEC 60204-32:2008, Safety of machinery — Electrical equipment of machines — Part 32: Requirements for hoisting machines

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

crane cabin

space in a crane or in its immediate vicinity which is specially designed, built and equipped for operating the crane

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3.2

control device

part of the control system of the crane, by means of which the desired control command is conveyed to the operating device

3.3

control element

part of a control device, such as push buttons, levers, pedals and switches, the manipulation of which creates the desired control command

3.4

seat index point

SIP

point on the central vertical plane of seat

NOTE Adapted from ISO 5353:1995, definition 3.1.

3.5

control station

permanent position of controls on or off the crane

4 Control stations

- **4.1** The crane operator's view, when the crane is in the prescribed operating position, shall enable the operator to monitor the movement of the crane and its load.
- **4.2** Control station dimensions shall be commensurate with the type of work and the length of continuous working periods of the crane operator. Minimum dimensions to permit ergonomically good working conditions and movements for the crane operator shall be as specified in the International Standards relevant to particular crane types.

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4.3 Those parts of the control station where no seat is provided, or where the crane operator is required to work in a standing position, shall have a minimum free standing height of 2 m.

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- **4.4** If vibration damping elements are also used as mountings for a control station, means shall be provided to prevent detachment of the control station in the event of failure of the damping elements.
- 4.5 Fixings used for mounting the control station shall be of a type which prevents unintentional loosening.

Fixings, excluding vibration damping elements, shall be made from fire retardant materials.

- **4.6** All standing areas shall be free of tripping hazards.
- **4.7** All standing and walking areas shall be slip resistant.
- **4.8** The strength of all parts of control stations and their supporting structure shall be considered as part of the crane structural design.

The rated capacity of the elevating control station shall include:

- at least 120 kg (one person, including his personal equipment);
- tools and equipment other than personal equipment.

The minimum rated capacity shall be 150 kg.

4.9 The control station shall be free of projecting parts. Edges shall have radii (minimum 2 mm) or be chamfered (minimum 2 mm \times 2 mm).

4.10 Protection against electric shock for direct or indirect contact shall be as specified in Clause 6 of IEC 60204-32:2008.

5 Cabins

5.1 General

- **5.1.1** Requirements for the dimensions are given in the International Standards relevant to particular crane types.
- **5.1.2** The cabin interior shall be such that it can be quickly and easily cleaned.
- **5.1.3** If required, the cabin shall be equipped with sufficient and suitable interior lighting.

Local lighting for the controls, which is substantially free from glare and unwanted reflections, may be necessary; this light source shall be operated by a separate switch. A power socket shall be provided to facilitate maintenance activities.

- **5.1.4** If a cabin roof is intended to drain water off, the water shall not run over the windows or door.
- **5.1.5** The cabin shall include provisions for reducing the effects of glare and reflections.

When necessary, the cabin shall be fitted with shields that minimize glare without restricting visibility.

5.1.6 Electric wiring shall run separately from hydraulic lines. Electric wiring and hydraulic lines shall be effectively protected against damage where a risk exists ten at

5.2 Windows

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- https://standards.itch.ai/catalog/standards/sist/016172d0-5ee3-48f7-85e8-**5.2.1** Each floor window shall be fitted with a grid or be designed for loading (e.g. heavy-duty safety floor windows fitted with multi-layered laminated glass). When the window can be opened, protective means shall be provided to prevent persons and materials from falling.
- **5.2.2** Floor grids shall:
- a) not be supported by the window;
- b) allow cleaning of the window.

The design of the grid should be such that its effect on the crane operator's view is minimized.

- **5.2.3** Any wall window shall
- a) be able to withstand, without failure, the application of 1,25 kN applied at 90° to any 500 mm² area of the window and its mounting, or
- b) be provided with protection up to a minimum height of 1 m from the cabin floor level.
 - Where the protection is by means of horizontal bars, the spaces between the bars shall not exceed 0,4 m and the height between the cabin and the lowest bar shall not exceed 0,25 m.
 - Where the protection is by means of vertical bars, the spaces between the bars shall not exceed 0,3 m.
- NOTE Vertical positioning of protective bars is known to cause less obstruction to the vision of crane operators.
- **5.2.4** If using glass for windows, the glass shall be tempered or laminated or both.