SLOVENSKI STANDARD
SIST EN 13015:2002+A1:2008

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Vzdrģevanje dvigal (liftov) in tekoļ ih stopnic - Pravila za vzdrģevalna navodila

Maintenance for lifts and escalators - Rules for maintenance instructions

Instandhaltung von Aufzügen und Fahrtreppen - Regeln für Instandhaltungsanweisungen

Maintenance pour les ascenseurs et les escaliers mécaniques - Règles pour les instructions de maintenance

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91.140.90 Dvigala. Tekoļ e stopnice Lifts. Escalators

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Maintenance pour les ascenseurs et les escaliers mécaniques - Règles pour les instructions de maintenance

Instandhaltung von Aufzügen und Fahrtreppen - Regeln für Instandhaltungsanweisungen

This European Standard was approved by CEN on 21 June 2001 and includes Amendment 1 approved by CEN on 29 June 2008.

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Foreword

This document (EN 13015:2001+A1:2008) has been prepared by Technical Committee CEN/TC 10, "Lifts, escalators and moving walks", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2009, and conflicting national standards shall be withdrawn at the latest by January 2009.

This document includes Amendment 1, approved by CEN on 2008-06-29.

This document supersedes EN 13015:2001.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟨A1⟩ ⟨A1⟩.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

⟨A1⟩ For relationship with EC Directive(s), see informative Annexes ZA, ZB and ZC, which are integral parts of this document. ⟨A1⟩

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

0 Introduction

This European Standard is a type C standard as stated in EN 1070.

Only correct and preventative maintenance performed by a competent maintenance person in conformity with the maintenance instructions can ensure the safe and intended functioning of an installation.

In this Standard it is assumed that the installation to be maintained has been legally placed on the market.

1 Scope

This European Standard specifies the elements necessary for the preparation of the instructions for the maintenance operations, as in **3.1**, which are provided for new installed passenger lifts, goods passenger lifts, accessible goods only lifts, service lifts, escalators and passenger conveyors.

This European Standard does not cover:

a) instructions for the installation and the dismantling;

b) any legal examinations and tests based on national regulations.

Existing installations are not covered by this Standard, but it can be taken as a reference.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 81-1, *Safety rules for the construction and installation of lifts - Part 1: Electric lifts*

EN 81-2, *Safety rules for the construction and installation of lifts - Part 2: Hydraulic lifts*

EN 81-3, *Safety rules for the construction and installation of lifts - Part 3: Electric and hydraulic service lifts*

[A1] deleted text [A1]

prEN 81-7, *Safety rules for the construction and installation of lifts - Part 7: Rack and pinion lifts*

[A1] deleted text [A1] EN 81-28, *Safety rules for the construction and installation of lifts - Part 28: Remote alarms on passenger and goods passenger lifts*

[A1] EN 115-1 [A1], *Safety rules for the construction and installation of escalators and passenger conveyors*

[A1] EN ISO 14121-1:2007, *Safety of machinery - Risk assessment – Part 1: Principles (ISO 14121-1:2007)* [A1]

ISO 3864 [A1] series [A1], *Safety colours and safety signs*

3 Definitions

For the purposes of this European Standard, the definitions in EN 81-1, EN 81-2, EN 81-3, [A1] deleted text [A1] prEN 81-7, [A1] deleted text [A1] EN 81-28, [A1] EN 115-1 [A1], [A1] EN ISO 14121-1 [A1], and the following apply:

3.1
maintenance
all the necessary operations to ensure the safe and intended functioning of the installation and its components after the completion of the installation and throughout its life cycle.

Maintenance includes:

a) lubrication, cleaning, etc.;

However, the following cleaning operations can be not considered as maintenance:

1) cleaning of the external parts of the well;

2) cleaning of the external parts of the escalator or passenger conveyor;

3) cleaning of the inside of the car.

b) checks;

c) passenger rescue operations;

d) the operations of setting and adjustment;

e) repair or changing of components which may occur due to wear or tear and do not affect the characteristics of the installation.

The following are not considered as maintenance operations:

a) changing of a major component such as the machine, the car, the control panel, etc., or safety component such as safety gear, etc., even if the characteristics of the new component are the same as the original;

b) replacement of the installation;

c) modernisation of the installation, including the changing of any characteristic of the installation (such as speed, load, etc.);

d) rescue operations carried out by Fire Brigades

3.2
maintenance organisation
company or part of company where competent maintenance person(s) carry out maintenance operations on behalf of the owner of the installation

3.3
competent maintenance person
designated person, suitably trained (see EN ISO 9000 series), qualified by knowledge and practical experience, provided with necessary instructions and supported within their maintenance organisation to enable the required maintenance operations to be safely carried out

3.4
manufacturer
natural or legal person who takes responsibility for the design, manufacture and placing on the market either of safety components for lifts or of machinery (escalator, passenger conveyor, service lift and accessible goods only lift)

3.5
installer
natural or legal person who takes responsibility for the design, manufacture, installation and placing on the market of lifts

3.6
installation
completely installed passenger lift or good passenger lift or accessible goods only lift or service lift or escalator or passenger conveyor

3.7
owner of the installation
natural or legal person who has the power of disposal of the installation and takes the responsibility for its operation and use

3.8
rescue operation
operation starting after receiving notification of a person(s) trapped in a lift and finishing by releasing the trapped person(s)

4 Elaboration of maintenance instructions

4.1 General

The installations covered by this European Standard shall be maintained in good working order in accordance with the installer's instructions. To this effect, regular maintenance of the installation shall be carried out, to ensure, in particular, the safety of the installation. The safety of an installation shall take into account the ability to be maintained without causing injury or damage to health.

Regular maintenance of the installation shall be carried out to ensure the reliability of the installation.

The access and the associated environment shall be maintained in good working order in accordance with the installer instructions.

The instructions for maintenance of an installation according to the Lifts Directive shall be provided by the installer, as defined in **3.5**, after completion of the installation, as a result of a risk assessment.

The instructions for maintenance of the safety components of lifts shall be provided by the manufacturer to the installer as respectively defined in 3.4 and 3.5.

The instructions for maintenance of an installation according to the Machinery Directive shall be provided by the manufacturer, as defined in **3.4**, when placed on the market, and be the result of a risk assessment.

In order that the aim of the maintenance instructions can be achieved, they shall be formulated so that they can be clearly and easily understood by competent maintenance persons.

The competence of the maintenance person within the maintenance organisation shall be continuously updated.

NOTE The owner of the installation should be informed that the qualification of the maintenance organisation is in conformity with the regulations applicable in the country in which the installation operates ; if no regulations exist, the qualification can be ensured by a certified quality system in accordance with EN ISO 9001 supplemented if necessary to take into account the specific features of the installation.

The installer/manufacturer shall provide maintenance instructions intended for the owner of the installation (see **4.3.2**) including information intended for the maintenance organisation (see **4.3.3**).

4.2 Elements to be taken into account for the maintenance instructions

When preparing the content of the maintenance instructions (see **4.3**, clauses **5** and **6**) the following elements shall be taken into account:

a) the specifications and the intended use of the installation (type of installation, performance, type of goods to be transported, type of users, etc.);

b) the environment in which the installation and its components are installed (weather conditions, vandalism, etc.);

c) any restriction of use;

d) the result of the risk assessment (see clause **5**) for every working area and for every task to be undertaken;

e) the specific maintenance instructions provided by the manufacturer of safety components;

f) in case of components other than safety components, where maintenance is necessary, the maintenance instructions provided by the manufacturer of these components.

4.3 Information to be included in the maintenance instructions

4.3.1 General

The maintenance instructions shall contain information relating to the tasks of the owner and respectively the maintenance organisation.

4.3.2 Information to the owner of the installation

The information relating to the tasks of the owner of the installation shall include the following:

4.3.2.1 The need for the owner to keep the installation in a safe operating condition. To fulfil this the owner shall use a maintenance organisation complying with the requirements of the Standard.

NOTE It is recommended to inform the owner of the installation about the need to use a maintenance organisation with adequate and proper insurance cover provided by an insurance company.

4.3.2.2 The need for the owner to take care of any National regulations and other requirements, where relevant, and their implications on maintenance.

4.3.2.3 The need for planned maintenance to be carried out by a maintenance organisation, at the latest when the installation is put into service or if the installation is to remain unused for a long period of time before first being put into service.

4.3.2.4 The importance for the owner of the installation to have the same maintenance organisation in the case of several installations having common well/spaces and/or machine room.

4.3.2.5 The need for the owner of a passenger-/goods passenger lift to keep, as described in [A1] deleted text 〈A1〉,EN 81-28, the two-way means of communication efficient and linked to a 24 h rescue service for the whole of the time that the installation can be used.

4.3.2.6 The need for the owner to remove the passenger-/goods passenger lift from service when the two-way means of communication is out of order.

4.3.2.7 The need for the owner to put the installation out of service in case of dangerous situations.

4.3.2.8 The need for the owner of the installation to inform the maintenance organisation:

a) immediately about any perceived abnormal operation of the installation or abnormal change in its direct environment;

b) immediately after putting the installation out of service in the case of a dangerous situation;

c) after any rescue intervention by their authorised and instructed person(s) (see clause **6**);

d) before any modification related to the installation and/or its environment or use;

NOTE The owner of the installation should obtain from the company carrying out the relevant modification the maintenance instructions for the maintenance organisation.

e) before any authorised third party inspection or works other than maintenance works are carried out on the installation;

f) before taking the installation out of service for a prolonged period of time;

g) before putting the installation back into service after a prolonged period of non operating time.

4.3.2.9 The need for the owner of the installation to take into consideration the consequences of the risk assessment carried out by the maintenance organisation (see **4.3.3.4** and **5.1**).

4.3.2.10 The need for the owner of the installation to make sure that the risk assessment for maintenance is carried out:

a) if the maintenance organisation is replaced;

b) if the use of the building and/or the installation changes;

c) after a major modification of the installation or of the building;

d) if it is the case, after an accident involving the installation.

4.3.2.11 The need for the building owner to ensure, through a risk assessment, that:

a) their premises are safe and free from risk to health as far as is practicable. This includes access to the premises and installation equipment, and articles or substances used according to the regulation for the Use of Work Equipment at the Workplace;

b) the persons using the premises are informed about any remaining risks;

c) any action to be done as a consequence of his risk assessment is carried out.

Regarding the access ways to areas reserved to maintenance persons, the need for the owner of the installation to inform the maintenance organisation, in particular about:

1) the access ways to be used and fire evacuating procedures from the building;

2) the place where the keys of the reserved areas can be found;

3) if necessary, the persons who shall accompany the maintenance persons to the installation;

4) if necessary, personal protective equipment to be used in the access ways, and, possibly, where this equipment can be found.

The information shall be made available also on site to the maintenance organisation.

4.3.2.12 The need for the owner of the installation to ensure that the name and the telephone number of the maintenance organisation are always available to the user of the installation, permanently affixed and clearly visible.

4.3.2.13 The need for the owner of the installation to ensure that the keys of machine and pulley room doors (trap doors) and of inspection and emergency doors (trap doors) are permanently available in the building and are used only by persons authorised to gain access.

4.3.2.14 The need for the owner of the installation to provide, in all circumstances, safe access to the building and to the installation for the maintenance organisation involved in the rescue of persons.

4.3.2.15 The need for the owner of the installation to keep the access to working areas and working rooms safe and free for the maintenance persons and to inform the maintenance organisation about any hazard or change in the workplace and/or the access ways (lighting, obstructions, ground conditions, etc.).

4.3.2.16 In addition to those examinations and tests which the owner of the installation entrusts to the maintenance organisation, the need for the owner to carry out periodically, in their own interests, the following:

a) for lifts:

A full ascent and descent to assess any changes in the quality of the ride or damage to the equipment.

Typical items to be checked to ensure that they are in place, undamaged and functioning correctly are:

- landing doors and bottom door tracks;
- stopping accuracy;
- indicators that are not located in a reserved area;
- landing push controls;
- car push controls;
- door open controls;
- two-way means of communication in the car which provides permanent contact with a rescue service;
- normal car lighting;
- door reversal device;
- safety signs/pictograms.

For goods only and service lifts the checks to be carried out are the same, when relevant.

b) for escalators/passenger conveyors:

A full travel in both directions, when they exist, to assess any changes in the quality of the ride or damage to the equipment.

Typical items to be checked to ensure that they are in place, undamaged and functioning correctly are:

- all lighting and indicators;
- emergency stopping device;
- hand rails;
- skirting/deflector devices;
- combs ;
- safety signs/pictograms;
- approximation of speed between handrail and steps/pallets;
- steps/pallets;

- balustrade and panels;
- head guard and decking;
- safe and unobstructed access to entry and exit areas.

4.3.3 Information for the maintenance organisation

The information relating to the tasks of the maintenance organisation shall include the following:

4.3.3.1 The need to carry out the work of maintenance in conformity with the maintenance instructions and based on systematic maintenance checks.

After these checks, the maintenance organisation shall decide in conformity with the maintenance instructions what is required to be done.

A list of typical examples of maintenance checks to maintain the installation is shown in **annex A**.

NOTE Due to the fact that the components can be different in design and operation, it is therefore not possible to give specific guidelines in this Standard.

4.3.3.2 The need to update the original maintenance instructions if the installation changes its intended use and/or the environmental conditions existing on the completion of the installation.

NOTE The maintenance organisation should be provided by the owner of the installation with the relevant maintenance instructions where modifications are carried out on the installation.

4.3.3.3 The need for the maintenance organisation to ensure that a risk assessment for any working area and for any maintenance operation has been carried out taking into account the installer's maintenance instructions and all information supplied by the owner of the installation.

4.3.3.4 The need for the maintenance organisation to inform the owner of the installation about any work to be carried out as a consequence of a risk assessment especially for the access and/or the environment related to the building/installation.

4.3.3.5 The need to carry out a maintenance plan so that preventive maintenance is suitable for the installation and maintenance time is as short as reasonably practicable, without reducing the safety of persons, in order to minimise the non-operational time of the installation.

4.3.3.6 The need to adapt the plan for maintenance so as to take account of any predictable failures, e.g. those due to misuse, mishandling, deterioration, etc.

NOTE For this purpose a remote monitoring system, based on EN 627, which is able to report events or defects, helps to provide information.

4.3.3.7 The need to carry out maintenance operations by competent maintenance persons (see **3.3**) and provided with the necessary tools and equipment.

4.3.3.8 The need to maintain the competency of maintenance persons.

4.3.3.9 The need to carry out the maintenance periodically.

NOTE The actual frequency of maintenance interventions can be more accurately determined where a remote monitoring system is connected to the installation.

In determining the frequency of maintenance interventions, the following non-exhaustive list should be considered:

- number of trips per year, operating time and any non operating periods of time;
- age and condition of the installation;
- location and type of building in which the installation is installed, as well as the needs of the users and/or the kind of goods transported;
- local environment where the installation is situated, as well as external environmental elements, e.g. weather conditions (rain, heat, cold, etc.) or vandalism.