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**Ministry of Social Affairs and Health, Finland**

## **Government Decree on the Safe Use and Inspection of Work Equipment**

(403/2008)

### **Chapter 1**

#### **General provisions**

##### **Section 1**

###### **Scope of application**

- (1) This Decree applies to the use and inspections of machinery, equipment and other technical devices and their installations (*work equipment*) in work referred to in the Occupational Safety and Health Act (738/2002).
- (2) Chapter 4 also lays down safety requirements for protective structures, scaffolds, ladders and ropes used when carrying out work at height.
- (3) If any other statute concerning occupational safety includes provisions on structure, safe use or inspection of work equipment deviating from this Decree, those provisions must be applied instead of this Decree.
- (4) The Act on the conformity of certain technical devices to relevant requirements (1016/2004) lays down provisions on the placing on the market and use of technical equipment used at work.

##### **Section 2**

###### **Choosing work equipment, and its placement**

- (1) Employers must, for the employees' use, choose safe work equipment that is suitable for the work and the working conditions. The dimensions and strength of work equipment must correspond to the demands of the work. Work equipment must not be burdened or stressed in a way that creates any hazard.
- (2) While using work equipment, the working posture and location of employees using the equipment, as well as ergonomic principles, must be taken fully into account. Work equipment must be placed in such a way that it can be used safely. It must be especially

ensured that there is enough space to use the work equipment, and that the energy or substance used or produced by the work equipment can be safely transferred. Falls and movements of the equipment causing danger must be prevented by securing the work equipment or some other way.

### **Section 3**

#### **Instructions for use of work equipment**

- (1) The employer must see to that the manufacturer's instructions are taken into account when installing, using, maintaining or inspecting work equipment, and when carrying out other activities in connection with those operations.
- (2) When the manufacturer's instructions are not sufficient, or when there are no manufacturer's instructions available, the instructions must be supplemented, or new instructions must be drawn up when necessary. When necessary, an outside expert must be used when drawing up the instructions. The instructions must be kept up to date.
- (3) The instructions must be available and understandable for all employees concerned. Before new work or a work phase is started, it must be ensured that the employee can follow the instructions.

### **Section 4**

#### **Assessment and elimination of risks**

- (1) The employer must systematically analyse and evaluate the safety of the work equipment. This has to be done especially in connection with changes in production or work methods. When carrying out the evaluation, attention must be paid to the hazards and risks caused by the work equipment and its moving parts, external structure, physical and chemical properties, automatic functions, electricity, and other hazards and risks caused by the work and working conditions.
- (2) If the use of the equipment causes any hazard or risk, the employer must immediately take any necessary measures to eliminate the hazard or risk. The hazard must primarily be eliminated through technological measures relating to the structure or environment of the work equipment, like with the help of devices preventing access to the danger zone, or devices stopping the movement of dangerous parts before the danger zone. When the hazards cannot be eliminated through technological measures, safe use of the work equipment must be ensured by using guidance, warning devices, safety signs and personal protective equipment.

### **Section 5**

#### **Ensuring the functional condition of work equipment**

- (1) Any work equipment must be kept safe throughout its whole operational life by regular service and maintenance. Any hazard or risk caused by failure, damage or wear must be eliminated. The control system and safety devices must function faultlessly. If the work equipment has a maintenance manual, it must be kept up to date.

- (2) Before the work equipment is taken into use, and after any alterations affecting its safety, it must be particularly ensured that the work equipment has been installed correctly and that it is in safe working order.
- (3) The employer must continuously monitor the working order of the work equipment by carrying out inspections, tests, measurements, and using other suitable ways. A qualified person that is familiar with the structure and use of the work equipment can carry out the inspection and testing necessary to ensure the working order of the work equipment. When necessary, an outside expert must be used.
- (4) Chapter 5 lays down provisions on initial and periodic inspections carried out by approved competent persons and competent bodies, and on a control monitoring system.

## **Section 6**

### **Properties of guards and safety devices**

- (1) Any guards and safety devices of work equipment must in a reliable and appropriate way protect against that risk or those risks against which they have been installed.
- (2) The guards and safety devices must:
  - 1) be of solid construction;
  - 2) not give rise to any additional hazard;
  - 3) not be easily removed or rendered inoperative;
  - 4) be situated at a sufficient distance from the danger zone;
  - 5) not restrict more than necessary the view of the operating area of the equipment; and
  - 6) they must allow the measures referred to in section 12.

## **Section 7**

### **Warning devices and markings**

Work equipment must bear the warning devices and warnings and markings essential to ensure the safety of employees. Warnings and markings on work equipment must be unambiguous and easily perceivable and understandable.

## **Section 8**

### **Control devices and control systems**

- (1) Control devices must be located outside danger zones, except for certain control devices that necessarily have to be used inside a danger zone. In that case, other measures have to be used to ensure that the use of the control devices does not cause any danger. Control devices must be protected in a way that prevents their unintended use.
- (2) Control devices of work-equipment that affect safety must be clearly visible and identifiable, and appropriately marked.
- (3) Control systems must be reliable and they must, if possible, be secured in a such a way that their failure or a change in their energy level does not cause any danger. The control systems

must be chosen taking account of the deficiencies, malfunctions and restrictions that are likely to occur in their intended operating conditions.

## **Section 9**

### **Starting the work equipment**

- (1) It must not be possible to start work equipment by any other means but by deliberate action on a control device provided for the purpose.
- (2) The provisions mentioned above in the first subsection do not apply to such restart or a change in operating conditions that result from the normal operating cycle of an automatic machine.
- (3) Before starting the work equipment the operator must be able to ensure, from the main control position, that no person is present in the danger zones. If this is not possible, the system must automatically give a reliable audible or visible or otherwise noticeable warning signal whenever the machinery is about to start. The signal must be given in a way that has been informed of in advance. An exposed employee must have enough time to leave the danger zone or a means to avoid hazards caused by the starting or stopping of the work equipment.

## **Section 10**

### **Stopping the work equipment, and emergency stop**

- (1) All work equipment must be equipped with a control to stop it completely and safely.
- (2) Each workstation must be fitted with a control to stop some or all of the work equipment, so that the equipment is in a safe state. The stop control of the equipment must have priority over the start controls. When the work equipment or the dangerous parts of it have stopped, the energy supply to those devices must stop.
- (3) Where appropriate and depending on the hazards the equipment presents and its normal stopping time, work equipment must be fitted with an emergency stop device.

## **Section 11**

### **Isolation from energy sources**

Work equipment must be fitted with clearly identifiable devices to isolate it from all its energy sources. When necessary, the devices must be lockable. When the energy supply has been switched off, it must be possible to remove the energy stored in the work equipment in a way that does not cause any danger.

## **Section 12**

### **Safety of maintenance work**

- (1) In connection with installation, service, repair and other maintenance work, the employer must ensure that

- 1) the employee has received enough information, training and guidance concerning special circumstances;
  - 2) when necessary, the persons representing the employer and carrying the responsibility for the work have accepted the work to be carried out and given their permission to begin the work;
  - 3) any arrangements and measurements necessary for the safety of the work have been carried out in the workplace;
  - 4) any pressure and flow of gas and fluids have been switched off;
  - 5) electric tension has been switched off;
  - 6) the load on lifting machinery has been secured in such a way that a failure of the machinery cannot cause any danger;
  - 7) starting work equipment under repair has been prevented in a reliable way during the repair work, if the employee is situated in the danger zone;
  - 8) the work equipment in use is in order and suitable for the intended purpose;.
  - 9) it has been taken care of that dangerous substances or lack of oxygen do not cause any danger during work in tanks or enclosed places;
  - 10) appropriate personal protective equipment, instruments and other equipment are used;
  - 11) sufficient arrangements have been made to ensure the stability and carrying capacity of scaffolds, work platforms and ladders;
  - 12) any unnecessary access to the danger area has been prevented.
- (2) If it is necessary to carry out work referred to in subsection 1 when the work equipment concerned is running, written instructions must be drawn up for the work. The instructions must include appropriate guarding measures or present a way to carry out the work outside the danger zone. The work must be carried out, if possible, without removing the guard or safety device.

### **Section 13**

#### **Weather conditions**

- (1) The employer must arrange any work at height and any use of work equipment exposed to weather conditions in such a way that wind conditions, frozen work equipment, rain or snowfall, lightning or other weather conditions do not endanger the safety and health of the employees.
- (2) Work referred to in subsection 1 must be halted when meteorological conditions deteriorate to the point of jeopardizing the safety of the employee.

### **Section 14**

#### **Special competence requirements**

- (1) Drivers of mobile cranes with a lifting capacity of more than 5 tons and drivers of tower cranes must have a relevant vocational diploma or an applicable part thereof.
- (2) If the loading moment of a loader crane exceeds 25 tonne-meters and the loader crane is primarily intended for other use than loading a vehicle, its driver must have a relevant

vocational diploma or an applicable part thereof.

- (3) The office of the relevant Occupational Safety and Health Inspectorate may on special grounds grant the employer a site-specific permission to use a person without the competence mentioned in subsection 1 or 2 for driving a certain crane, provided that the person's ability to drive the crane has been proved in some other way and the safety of employees has been ensured.
- (4) Drivers of fork-lift trucks and devices for lifting persons must have a written permit given by the employer to carry out the work. Before giving the permit, the employer must ensure that the driver has sufficient ability and skills to use the work equipment.
- (5) The office of the Occupational Safety and Health Inspectorate of Uusimaa decides nationally whether a foreign examination must be accepted to correspond to the competence referred to in subsections 1 and 2.
- (6) Provisions on employers' duty to arrange occupational health care and on the content and organisation of the occupational health care are laid down by the Occupational Health Care Act (1383/2001).

## **Chapter 2**

### **Supplementary provisions on mobile work equipment**

#### **Section 15**

##### **Safety of mobile work equipment**

- (1) Mobile work equipment must be such that the risks to its driver or other ride-on employees are minimised. Such risks include the risks of contact with wheels or tracks of work equipment. If work must be carried out during the journey, speed must be adjusted as necessary.
- (2) Mobile work equipment that can cause danger to employees when it is moving must be equipped with:
  - 1) equipment that enables prevention of unauthorised start-up;
  - 2) equipment for reducing the consequences of a potential collision of the work equipment;
  - 3) a device for braking and stopping the equipment. Where safety constraints so require, emergency facilities operated by easily accessible controls or automatic systems must be available for braking and stopping the equipment in the event of failure of the main facility;
  - 4) adequate accessories to improve visibility, if the driver's direct field of vision is inadequate to ensure safety;
  - 5) lighting equipment suitable for the work, if the work equipment is used in dark spaces; and
  - 6) fire-fighting equipment, if the work equipment, its use or load constitutes a fire hazard, and such equipment is not available in sufficient proximity to the place of

use.

- (3) Where remote-controlled work equipment may in normal use collide with an employee, or an employee may be crushed, the work equipment must have facilities to guard against these risks, unless other appropriate devices are present to control the risks. Remote-controlled work equipment must stop automatically once it leaves the control range;

## **Section 16**

### **Protection against risk of fall and falling objects**

- (1) Any risks caused by fall of work equipment with ride-on employees must be prevented by a safety cabin, safety structure, or other similar device that:
  - 1) prevents the work equipment from tilting further than onto its side; or
  - 2) ensures sufficient clearance around the ride-on employees if the work equipment rolls or turns over.
- (2) A fork-lift truck must be equipped with a safety belt or other similar structure that holds the driver on the seat in case the fork-lift truck turns over.
- (3) If any goods to be transported or other objects can fall down and hurt the driver or some other ride-on person, the equipment must, where appropriate, be fitted with a safety structure ensuring a safe space that is large enough.

## **Section 17**

### **Cabin requirements**

- (1) Ride-on excavators, diggers, tractors and forest machinery (forest tractors) must be equipped with a safety cab that protects the driver against weather conditions.
- (2) When work equipment referred to in subsection 1, or other work equipment fitted with a closed cab, are driven on ice, swamp or similar base into which the equipment could sink, the cab must be fitted with an emergency exit taking to another direction than the normal exit.
- (3) The seat of a tractor used for excavating must be turnable in the direction of the excavator controls and the working area.
- (4) The provisions of subsection 1 must not be applied to tractors with engine power up to 30 kilowatt.
- (5) Section 23 (1)(3) lays down provisions concerning crane cabins.

## **Section 18**

### **Safety of drive units**

- (1) Where an inadvertent locking of the power transmission equipment between an item of mobile work equipment and its accessories and/or anything towed might create a specific risk,

such work equipment must be equipped or adapted to prevent blockages of the power transmission equipment. Where such locking cannot be avoided, the danger must be prevented by some other reliable means.

- (2) Power transmission equipment on mobile items of work equipment must be attached in a way that prevents them from trailing on the ground.

## **Section 19**

### **Protection against exhaust gas**

Mobile work equipment with a combustion engine must not be used unless sufficient supply of air presenting no health or safety risk can be guaranteed in working areas.

## **Chapter 3**

### **Supplementary provisions applicable to lifting machinery**

## **Section 20**

### **Planning of lifting operations and selection of lifting machinery**

- (1) When planning a lifting operation and selecting lifting machinery, the following must be observed:
- 1) It must be ensured that any lifting operations are carefully planned in order to be able to carry out the operations without endangering the safety of employees. Special care must be taken to ensure that no one is unnecessarily present under suspended loads or in danger zones during the lifting operation.
  - 2) Lifting machinery suitable for the purpose and with sufficient capacity must be selected for the lifting operation.
  - 3) It must be ensured that there is enough room to carry out the lifting operation.
  - 4) It must be ensured that the lifting machinery is placed on a firm and even base for driving and lifting in a way that prevents the lifting machinery from tilting, falling or moving unintentionally.
  - 5) When necessary, suitable lifting accessories must be selected for lifting the load.
  - 6) It must be ensured that the field of vision from the place for using the lifting machinery is adequate. Where the driver's field of vision to any direction is restricted, the employer must ensure that the lifting machinery is fitted with a signalling system to warn of movements to that direction, if no other measures have been taken to ensure safe working.
  - 7) If two or more lifting machines are used to lift a load simultaneously, a plan for the lifting work must be drawn up to ensure that the operations are properly coordinated.
  - 8) When two or more lifting machines are installed or erected on a site in such a way that their working radii overlap, appropriate measures must be taken to avoid collision between loads or lifting machinery parts.
- (2) Where it is necessary to carry out work under the load or in the danger zone when a lifting operation is going on, the safety of employees must be secured in a reliable way.

- (3) What is laid down in paragraphs 1 and 2 regarding lifting operations must apply, where appropriate, also to transfer and transport operations.

## **Section 21**

### **Use of lifting machinery**

- (1) Particular care and attention must be taken when using lifting machinery. It must be ensured that the lifting operation is carried out as planned and in a safe way.
- (2) The use and operating conditions of lifting machinery must correspond to the basis of design notified by the manufacturer. The maximum permissible load of the lifting machinery must not be exceeded.
- (3) Lifting machinery with the maximum load of at least 1,000 kg and the turnover moment of at least 40,000 Nm must be equipped with a device that prevents overloading.
- (4) The strength and stability of lifting machinery must be ensured having regard, in particular, to the loads to be lifted and the stress induced at the mounting or fixing points of the structures.
- (5) In the beginning of a work shift, it must be ensured that lifting machinery has been sufficiently supported, and the lifting machinery must be tested to ensure that its controls and safety equipment operate as planned.
- (6) When lifting packages, the markings on the package must be taken into account. Where such markings do not exist, the safety of the lifting operation must be ensured by other means before lifting is begun.

## **Section 22**

### **Markings on the lifting machinery and lifting accessories**

- (1) Lifting machinery must be clearly marked to indicate its maximum load, where appropriate with a load plate giving the maximum load for each configuration of the machinery.
- (2) Lifting accessories must bear markings that are necessary for safe use.
- (3) Lifting machinery that is not designed for lifting persons but that might in error be used for that purpose must be appropriately and clearly marked to forbid lifting of persons.

## **Section 23**

### **Additional requirements for cranes**

- (1) In addition to the provisions of sections 21 and 22, the following must be observed:
  - 1) Loads for cranes must be made with care to prevent the loads from falling or disintegrating. Work must be organised in such a way that when an employee is attaching or detaching a load by hand, he or she retains direct or indirect control of the crane. The risk to employees of the load drifting dangerously or falling freely or being released unintentionally must be minimised.

- 2) Crane location and the visibility at the working site must fulfil the requirements of safe use.
  - 3) The crane must be equipped with an appropriate control cab when the structure or the use of the crane or conditions at the work site are such that the crane cannot otherwise be controlled without risk to safety and health,
  - 4) Access to the control positions of the crane must be through safe, fixed and appropriate means of access. It must be possible easily and without ambiguity to control the functions of the crane and, if necessary, the loading location, from the control position of the crane. When the operator does not have a sufficiently good view of the load during lifting, appropriate accessories or a signaller must be used.
  - 5) Safe means of access must exist to those parts of the crane that require regular maintenance, and appropriate maintenance platforms and room must exist for the maintenance of these parts.
- (2) A maintenance platform placed next to the crane may only be used when the size, structure or position of the lifting machinery is such that fixed means of access or a platform cannot be reasonably required, and when special measures have been taken to ensure safety. The maintenance platform must be present at the site or it must be possible to move it to the site quickly if necessary.
  - (3) If a crane cannot hold up the load in the event of power failure, access to the danger zone must be prevented.

## **Section 24**

### **Lifting accessories**

- (1) Before lifting accessories are used, their condition and markings must be checked.
- (2) If a lifting accessory lacks a marking showing its maximum permissible load it must not be used.
- (3) Lifting accessories must be stored in a way that ensures that they will not be damaged or degraded.
- (4) Damaged lifting accessories must not be used.
- (5) Lifting accessories must be attached to the load by lifting points designed for that purpose, or safe lifting of the load must be ensured in some other way.

## **Section 25**

### **Lifting persons**

- (1) Lifting persons is only permissible using lifting machinery designed for that purpose, unless otherwise provided by statute.
- (2) Lifting machinery manufactured for lifting persons must be chosen in such a way that when using the lifting machinery:

- 1) eventual risk of the elevating cage or scaffolding bridge falling is prevented by suitable devices;
  - 2) the persons in the elevating cage are prevented from being injured, trapped or crushed; and
  - 3) it is ensured that persons trapped in the cage or on the scaffolding bridge in the event of failure or for any other reason are safe and can be freed.
- (3) In the elevating cages of telescopic cranes or slewing cranes the employees must use personal protective equipment against falls.
  - (4) Before work on suspended scaffolding is started, the possibilities and ways to attach the anchor ropes as well as the placing of the ropes must be examined. Reliable proof must be given to show that the attachment of the suspended scaffolding to the building or other structure is acceptable.

## **Chapter 4**

### **Safety requirements for work at height**

#### **Section 26**

##### **Guard structures and equipment preventing falls**

- (1) Guard structures and equipment preventing falls must have such strength that they, as effectively as possible, prevent persons from falling or stop their falling. Rails and other general safety structures against falls must be continuous, except for any access leading to ladders or stairways.
- (2) When the work requires that a guard structure or equipment providing protection against falls will be temporarily removed, other effective protective measures must be used instead. The work must not be carried out before these protective measures have been put into use. The guard structure or equipment providing protection against falls must be replaced immediately after the work in question has been finished or interrupted.

#### **Section 27**

##### **Instructions, calculations and plans for scaffolding**

- (1) When the instructions for use and dismantling of scaffolds deviate from manufacturer's instructions, or when the instructions are not based on strength and stability calculations, the employer must see to that any necessary calculations are made, except for situations where the scaffolds are erected in compliance with an established and safe method for erection.
- (2) A plan for the erection, use and dismantling of the scaffolding must be drawn up in an appropriate way regarding the structural demands of the scaffolds chosen and the work to be carried out. The person drawing up the plan must be competent for the task. The plan can be a general plan, complemented by data on the special properties of the scaffolding.

#### **Section 28**

### **Properties of the scaffolding**

- (1) During the use and transfer of scaffolds, and in all stages of their erection and dismantling, the scaffolds and their platforms and means of access must remain strong, rigid and stable enough with regard to safety.
- (2) The risk of scaffolding supports sliding must be prevented by fixing a device against sliding onto the support surface, or by some other means similarly effective, and the bearing surface must be durable enough. The stability of the scaffold must be ensured. Appropriate device must be used for preventing scaffolds on wheels from moving while work is carried out on the scaffold.
- (3) The platforms of the scaffolds must have such dimensions, form and assembly that they are suitable for the nature of the work and will sustain the loads that need to be used, and that working and moving on them is safe. The platforms of the scaffolds must be installed in such a way that the parts of the scaffolding cannot move during regular use. No unguarded gaps must be left between the platform parts and the vertical safety structures or equipment preventing falls.

### **Section 29**

#### **Erection, dismantling and altering of scaffolds**

- (1) Scaffolds may be erected, dismantled and altered only by employees who have been given special instructions and guidance relating to the following issues:
  - 1) erection, dismantling and altering of the scaffold according to the plan;
  - 2) safety during the erection, dismantling and altering of the scaffold;
  - 3) measures to prevent the risk of falls of persons or objects;
  - 4) safety measures relating to weather conditions weakening the safety of the scaffold;
  - 5) maximum permissible loads; and
  - 6) other potential risks relating to the erection, dismantling or alteration.
- (2) The person leading the work as well as the employees concerned must have on hand the manufacturer's instructions, or a plan for erecting and dismantling the scaffold.
- (3) When erecting, dismantling or altering a scaffold or a part of it, it must be labelled with prohibition and warning signs, as separately provided, and appropriate barriers must be used to prevent access to the dangerous zone.

### **Section 30**

#### **Use and placing of ladders**

- (1) Ladders must be used in such a way that the employees concerned can all the time hold them safely and get a safe support. Manual carrying of loads must not prevent maintaining a safe hold onto the ladder. Leaning ladders must not be used as work platform.
- (2) Ladders must be placed in such a way that they stand steadily during the use. Movable ladders must stand on a stable, durable, immobile base of appropriate size, so that the rungs

remain in horizontal position. Suspended ladders must be attached safely and, except for rope ladders, in such a way that they cannot move or swing.

- (3) The risk of movable ladders falling or their legs sliding must be prevented by fastening their upper or lower end, using a device against sliding, or by some other means similarly effective. The ladders must be so tall that they extend far enough above the level to be reached, if a safe hold cannot be guaranteed by any other measures. Lockable multi-element combined ladders and extendable ladders must be used in such a way that the steps, limiters, joints and locking hooks remain strong and durable in the working conditions, and that the parts cannot move in relation to each other. Ladders on wheels must be placed in an immobile position before stepping on them.

### **Section 31**

#### **Moving and working with the help of rope access**

- (1) Moving and working with the help of rope access and positioning techniques is allowed only in circumstances where an analysis and evaluation of the risks of the work proves that the work can be carried out safely, and where the use of other, safer work equipment is not justified. When required by the analysis and evaluation of the risks of the work, or by the duration and ergonomic demands of the work, a seat with appropriate accessories must be used.
- (2) When using rope access and positioning techniques for moving and working, the following requirements must be fulfilled:
  - 1) The system must comprise at least two separately anchored ropes, one used as a means of access, descent and support (*work rope*), and the other used as backup (*security rope*).
  - 2) employees must be provided with and they must use an appropriate safety harness, and their harness must be coupled to the security rope;
  - 3) the work ropes must be equipped with safe means of ascent and descent and have a self-locking system to prevent the users from falling should they lose control of their movements. The security rope must be equipped with a mobile fall prevention system that follows the movements of the employee;
  - 4) the tools and accessories to be used by an employee must be coupled to the employee's safety harness or seat, or they must be secured by some other appropriate means;
  - 5) the work must be properly planned and supervised, so that an employee can be immediately rescued in an emergency; and
  - 6) the employees concerned must receive training and instructions specific to the operations in question, in particular rescue procedures.
- (3) The use of a single rope may be permitted only in exceptional circumstances where, in view of the analysis and assessment of risks, the use of a second rope would make the work more dangerous. In such a case, safety at work must be ensured with appropriate measures.

## **Chapter 5**

### **Initial and periodic inspections, and a condition monitoring system**

## **Section 32**

### **General provisions concerning initial and periodic inspections**

- (1) In addition to the provisions laid down in section 5, the employer must see to that an approved competent person or competent body carries out an initial inspection or periodic inspection in order to ensure that the work equipment mentioned in the annex has been correctly installed and that it is in safe functional order.
- (2) The extent of the inspection and inspection methods depend on the work equipment and its use, and which system is used for monitoring the condition of the equipment.
- (3) Work equipment mentioned in the annex must not be used at work if it has not been appropriately inspected.

## **Section 33**

### **Initial inspection**

- (1) An initial inspection must be carried out before taking work equipment into use for the first time or taking the work equipment into use after a significant alteration or after mounting it in a new place, or when machinery is taken into use after being out of use for a long time.
- (2) During the initial inspection it must be ensured that the work equipment has been installed in the right way in accordance with the directions laid down above in section 3, taking account of the purpose for the use of the work equipment, the suitability of its means of access and maintenance platforms, and the appropriate operation of its control and safety devices.
- (3) When necessary, lifting machinery must also be test loaded in order to ensure that its structure is strong and stable.

## **Section 34**

### **Periodic inspection**

- (1) Periodic inspections must be carried out at one-year intervals after the first initial inspection. However, when no initial inspection of the equipment is required, periodic inspections must be carried out at one-year intervals from the date when the employer took the work equipment into use. However, the inspection interval for tower cranes is two years.
- (2) The inspection period can be extended if the use of the work equipment is minor and if the circumstances put only very slight strain on the equipment. Similarly, the inspection period must be shortened if the use of the work equipment or the conditions of the use put special strain on the working condition of the equipment, or if there is some other especially important reason to ensure that the equipment is safe to use.
- (3) The work equipment must also be inspected to a necessary extent when such an accident or serious danger situation has occurred that affects the safety of its structure, or when the equipment has been exposed to exceptional circumstances weakening its safety.

- (4) During a periodic inspection, the working condition of the work equipment is ensured by especially checking that no danger is caused because of ageing, fatigue, wear, corrosion or damage. When necessary, non-destructive inspection methods must be used.
- (5) Lifting machinery must be given a necessary test run once every year in connection with an inspection, including a testing with the permissible maximum load every four years. However, the testing with the maximum permissible load must always be carried out in connection with a periodic inspection if overloading of the lifting machinery involves a risk of overturning.

### **Section 35**

#### **Thorough periodic inspection**

- (1) In addition to the periodic inspection meant above in section 34, lifting machinery must be subject to a thorough periodic inspection when the designed limits defined for the lifting machinery by the manufacturer are drawing close. If those limits are not known, a thorough periodic inspection must be carried out within 10 years after the device was put into use for the first time.
- (2) When assessing the right time for thorough periodic inspections, the following must be taken into account: how much strain the use of the lifting machinery has put on the machinery, what kind of damage has been noticed in connection with periodic inspections, which repairs have been carried out, and what kind of defects are typical for the machinery in question.
- (3) During a thorough inspection such assembly parts must be disassembled which are important for safety and which cannot otherwise be inspected in a reliable way. Non-destructive testing methods must be used when carrying out the inspection.

### **Section 36**

#### **Periodic inspections as part of a system for monitoring the condition of the equipment**

- (1) The employer can replace the periodic inspections by a system for condition monitoring accepted by a competent body, if the effects of the system correspond to the effects of periodic inspections. The competent body must assess the functioning of the condition monitoring system at least every five years.
- (2) The condition monitoring system must be described in writing, and the document must be available at the workplace. The document must include information of the follow-up systems and equipment as described in section 5, maintenance measures for each piece of equipment in the sphere of the system, and the tasks, responsibilities and competence requirements of the persons participating in the operation of the system. The document must inform of all measures carried out. When planning the number and content of measures and the schedule for measures, any information received concerning the risks, use and inspections of the subject to inspection must be taken into account.

### **Section 37**

#### **Performers of initial and periodic inspections**

- (1) Those carrying out initial and periodic inspections of work equipment mentioned in the annex must be bodies verified competent by an accreditation body referred to in section 4 of the Act on verifying the competence of conformity assessment services (920/2005), or independent competent persons approved by a certification body that is verified competent by an accreditation body. When necessary, the competent bodies or the competent persons must present a certificate of their competence, as well as written descriptions of their inspection methods.
- (2) The person carrying out the initial or periodic inspection must be familiar with the structure and use of the equipment as well as the inspection requirements and manufacturer's instructions concerning the equipment, and he or she must be able to notice any defects or deficiencies of the equipment. The person carrying out the inspection must independently, on the basis of safety technology matters, be able to assess which effects the defects and deficiencies noticed in the work equipment have on safety at work. When necessary, the person carrying out the inspection must make use of expert help especially when applying non-destructive testing methods, and when assessing risks caused by electricity.
- (3) An occupational safety and health representative and the primary user of lifting machinery, or other user when there is no primary user, must be given the opportunity to participate in the inspection where possible.

### **Section 38**

#### **Inspection reports and inspection marking**

- (1) An inspection report must be written on each inspection, and the report must describe the course of the inspection. The report must include any observations on the defects and deficiencies found affecting the safety of the work equipment, as well as any necessary instructions given to correct and eliminate them. The report must also include the inspector's assessment that imposes the date of the next periodic inspection or thorough periodic inspection, and which matters are to be investigated in the next inspection. The date of the latest thorough inspection must be written in the report.
- (2) The reports must be kept available during the whole operational life of the equipment. The latest report must be available at the workplace.
- (3) An inspection marking or a marking indicating the condition monitoring system must be made on the work equipment.

## **Chapter 6**

### **Entry into force**

#### **Section 39**

#### **Entry into force and transitional provisions**

- (1) This Decree enters into force on 1 January 2009.
- (2) This Decree repeals:

- 1) sections 6–13 of the Government Decision of 17 December 1980 on building hoists used for transporting persons (982/1980), as amended;
  - 2) Government Decision of 21 October 1982 on the application of occupational safety and health act on suspended scaffoldings and their inspection (769/1982), as amended;
  - 3) sections 5–7 and 8 of the Government Decision of 4 September 1997 on bolt driving guns and their inspections (862/1997); and
  - 4) Government Decision of 25 November 1998 concerning the acquisition, safe use and inspection of machinery used at work and other work equipment (856/71998), as amended.
- (3) Section 21(3) shall not be applied to lifting machinery taken into use before 1 September 1990.
- (4) Until 31 December 2011, the initial and periodic inspections of cranes and loader cranes referred to above in section 32(1) may be carried out, in addition to approved competent persons or competent bodies, by persons who were competent to inspect such equipment before this Decree entered into force.
- (5) Notwithstanding the provisions of this Decree, the exemption orders and other decisions made under the repealed Government Decision remain in force.

## ANNEX

## Inspections by machinery groups

↓	Inspections →	Initial inspection	Periodic inspection	Thorough inspections of lifting machinery
	<b>Machinery group</b>			
	<b>Mobile crane</b>	Competent body*	Competent body	Competent body
	<b>Vehicle lift,</b> where the lifting height is more than 0,5 m and where work is carried out under a load placed on the lifting machinery	Competent person	Competent person	Competent person
	<b>Machinery for lifting persons</b>	Competent person*	Competent person	Competent person
	<b>Machinery requiring installation for lifting persons</b>	Competent person	Competent person	Competent person
	<b>Loading crane</b>	Competent person	Competent person	Competent person
	<b>Loading crane,</b> where its loading moment exceeds 25 tonne-meters, and where the manufacturer has designed it for other use than primarily loading the vehicle	Competent body	Competent body	Competent body
	<b>Cranes and their tracks</b> lifting more than 500 kg	Competent person	Competent person	Competent person
	<b>Builders hoist designed for lifting persons</b>	Competent body	Competent body	Competent body
	<b>Tower crane</b>	Competent body	Competent body	Competent body
	<b>Lifting machinery for cargo- handling on vessels</b>	Competent body	Competent person	Competent person

\* = after significant alterations referred to in section 33(1)

For the purposes of this Annex, the following definitions shall apply:

- 1) *crane* means any power-driven lifting device which is used for lifting, lowering and transferring loads, and where the movements of the load are controlled only by a lifting rope, chain or equivalent mechanism. Also such lifting machinery is considered as a crane where swinging of the load is restricted by equipment that move along with the crane.
- 2) *tower crane* means any crane whose supporting structure is a tower which has a projecting boom at its top end, attached either to the top of the tower with ropes or bars, or to the foot of the tower with ropes that go through the top of the tower;
- 3) *loader crane* means any crane which is mounted on truck, other vehicle, trailer or machine and which is primarily used for loading the vehicle;
- 4) *mobile crane* means any crane with wheels or tracks that can be freely moved from one location to another either using its own power source or by attaching it to another vehicle;
- 5) *machinery for lifting persons* means any power-driven device which is fixed or mounted on a vehicle or a mobile platform and which is designed for lifting persons to perform work on the work platform of the machinery;

- 6) *vehicle lift* means any power-driven device which is designed for lifting or tilting cars or other vehicles to facilitate servicing, oiling, repairs or other operations carried out under the vehicle;
- 7) *builders hoist* means such temporarily mounted lifting machinery used for construction work or equivalent work that includes a cage moving along a travel way guided by fixed equipment, and that is designed to carry persons or goods between two or more landing levels within the limits of the machinery's maximum permissible load.

The lifting machinery mentioned above also means any equivalent lifting machinery whose structure and operating characteristics correspond to those of the machinery mentioned above.