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23 August 2005 (No. 617);

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If a whole or part of a paragraph has been amended, the date of the amending regulation appears in square brackets at the end of the paragraph. If a whole paragraph or sub-paragraph has been deleted, the date of the deletion appears in square brackets beside the deleted paragraph or sub-paragraph.

Republic of Latvia

Cabinet

Regulation No 85

Adopted 7 March 2000

## Procedures for Technical Supervision of Cranes

*Issued pursuant to  
Section 3, Paragraph two of the  
Law On Technical Supervision of Dangerous Equipment*

### I. General Provisions

#### 1. Terms used in these Regulations:

1.1. **boom** — load-carrying structure of a crane which ensures the necessary performance of the load gripping device (length of projection in the horizontal plane of the crane lifting mechanism from the turning axle of the mechanism to the axle of the load gripping device) and the lifting height;

1.2. **load gripping device** — a lifting device which is hung in a wire rope or a chain and which is intended for direct gripping of load or fastening of auxiliary cargo gripping devices; and

1.3. **auxiliary load gripping device** — an auxiliary device for the gripping of load in order to be able to move load in space in a horizontal and vertical direction.

2. These Regulations prescribe the procedures for technical supervision of cranes, as well as safety requirements to be observed by the crane operator in organising and carrying out work with a crane so as not to pose a threat to human life, health and property, as well as the environment.

3. A crane is a cyclically operating lifting installation that is intended for the lifting and moving of loads fastened by load gripping devices. A crane consists of a supporting construction (bridge, truss, jib, frame, tower, cab, gantry), a lifting mechanism (crab, telfer, wire ropes or chains, tackle), load pendant or gripping devices, and movement mechanisms (driving, turning, lifting of jib).

[23 August 2005]

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4. These Regulations do not apply to:

- 4.1. cranes with the lifting capacity of less than one tonne;
- 4.2. special load lifting mechanisms (for example, railway-laying machines, pipe laying machines, stacking lift trucks, lift trucks, electric loaders);
- 4.3. excavators, which are intended for work with earth excavation equipment or automatic grabs;
- 4.4. manual pulleys;
- 4.5. assembly pulley blocks and structures from which lifting mechanisms are hung;
- 4.6. load lifting mechanisms which are integral part of a technological installation; and
- 4.7. special cranes used for emergency and rescue work.

[23 August 2005]

5. Depending on the construction cranes shall be classified as follows:

- 5.1. bridge cranes — cranes with the load gripping device suspended from a trolley or telfer travelling along a bridge;
- 5.2. gantry cranes — cranes the load-carrying structure of which rests on two beams (legs) travelling along a rail track or different track;
- 5.3. boom cranes — self-propelled rotatable cranes with the boom or tower jib installation fixed on a platform which is situated directly on the undercarriage;
- 5.4. tower cranes — rotatable cranes with a jib;
- 5.5. portal cranes — full-swing boom cranes on a portal;
- 5.6. cable cranes — cranes the load-carrying structure of which are cable lines which are fastened at the upper part of the beams and the gripping device is connected to a trolley;
- 5.7. excavating cranes — excavators which are intended for work with a cargo gripping device suspended from wire ropes; and
- 5.8. electrical trolleys which together with the control cab move along surface rail tracks.

[23 August 2005]

6. Depending on the construction of the movement mechanism boom cranes shall be classified as follows:

- 6.1. crane-lorries;
- 6.2. caterpillar cranes;
- 6.3. wheel-mounted cranes;
- 6.4. special chassis cranes; and
- 6.5. railway cranes.

6.<sup>1</sup> The Ministry of Economics shall co-operate with the relevant standards technical committee and recommend to the limited liability company *Latvijas standarts* [Latvian Standard] a list of standards to be developed, adapted and applied in relation to these Regulations

[23 August 2005]

6.<sup>2</sup> The limited liability company *Latvijas standarts* [Latvian Standard] shall submit for publication in the newspaper *Latvijas Vēstnesis* [the official Gazette of the Government of Latvia] a list of those Latvian national standards which may be applied to fulfil the requirements of these Regulations (hereinafter – applicable standards).

[23 August 2005]

6.<sup>3</sup> An accredited institution regarding which the Ministry of Economics has published a notice in the newspaper *Latvijas Vēstnesis* (hereinafter – inspection institution) is entitled to perform technical inspections of cranes, if :

6.<sup>3</sup> 1. the Latvian National Accreditation Bureau has assessed the inspection institution and certified the conformity thereof with the competence criteria specified in standard LVS EN ISO/IEC 17020:2005 “General criteria for the operation of various types of bodies performing inspection” and conforms to the requirements of this Regulation; and

6.<sup>3</sup> 2. it has insured its civil legal liability in such an amount as to cover possible losses, which may be caused due to an erroneous or false opinion.

[23 August 2005]

6.<sup>4</sup> The Latvian National Accreditation Bureau shall assess and regularly examine the conformity of the inspection institution to the requirements specified in Paragraph 6.<sup>3</sup> of these Regulations.

[23 August 2005]

## II. Use of Cranes

7. The possessor of the crane shall be responsible for the location of the crane, appropriate and safe use, service and supervision in accordance with the requirements specified in these Regulations and the manufacturer’s instructions in order not to permit a threat to human life, health, property and the environment.

[29 May 2007]

8. The crane shall be registered (re-registered) in accordance with the procedures specified in regulatory enactments prescribing the registration of dangerous equipment.

9. Each crane must have a passport in the official language. For each concrete crane a passport in accordance with the sample of a passport (Annex 1) shall be drawn up and the veracity of the data certified by the possessor of the crane. The passport shall indicate at least the following information:

9.1. the name and address of the manufacturer, the authorised representative thereof or importer;

9.2. the type and model of the crane;

9.3. the main technical specifications of the crane;

9.4. information regarding wire ropes (geometrical dimensions, number of wires and material) and chains (geometrical dimensions and material);

9.5. technical documentation, drawings, principal schemes of electrical equipment and hydro-equipment if such assist in the understanding of the instructions provided by the instructions for use or if the possessor intends to extend the service life (resource) of the crane;

9.6. information regarding safety devices (limit switches and signalling equipment);

9.7. service life (resource) of the crane in years; and

9.8. the year of manufacture of the crane and the manufacturer’s allocated number.

[23 August 2005]

10. [23 August 2005]

10.<sup>1</sup> Alienating or otherwise transferring the crane to another possessor, the crane passport shall also be transferred. Data regarding the new possessor of the crane shall be indicated in the crane passport, which shall be approved by the State Labour Inspection in performing re-

registration in accordance with regulatory enactments regarding the registration of dangerous equipment.

*[29 May 2007]*

11. The possessor together with the crane passport shall keep also the instructions for assembly and use of the crane in the official language. The instructions shall indicate at least the following information:

- 11.1. the requirements for the erection and movement of the crane;
- 11.2. the procedures for the use of the crane;
- 11.3. the procedures for the technical service and supervision of the crane; and
- 11.4. the technical drawings for the crane, specifications, diagrams and calculations if they assist in understanding the references provided in the instructions.

*[23 August 2005; 29 May 2007]*

12. The crane possessor shall maintain the crane in working order, as well as ensure:

- 12.1. trained and instructed personnel for the servicing of the crane;
- 12.2. training and instruction of the crane servicing personnel;
- 12.3. development, approval and issue of instructions regarding technological processes, equipment servicing and work to the crane servicing personnel; and
- 12.4. storage of the crane documentation and instructions for use and presentation thereof to the State Labour Inspection officials and representatives of the inspection institutions in accordance with the procedures prescribed by regulatory enactments.

*[23 August 2005]*

13. The crane possessor shall have the following duties:

- 13.1. to prepare the crane for technical inspections performed by the inspection institutions;
- 13.2. to maintain auxiliary load gripping devices and containers in working order and reject them as defective in accordance with the applicable standards;
- 13.3. to maintain a shift log-book for the recording of technical maintenance and periodic inspections;
- 13.4. to ensure appropriate completion of the documentation (for example, instructions, shift log-book);
- 13.5. to take safety measures regarding loading and unloading work and construction assembly work and, if necessary, organise the management of the relevant works;
- 13.6. to issue an assignment for work under conditions of increased danger (Annex 2);
- 13.7. to check the knowledge of crane operators and slingmen and perform instruction at the places of work;
- 13.8. if defects and violations of instructions in the work with the crane are determined, stop the operation of the crane and ensure elimination of the deficiencies detected; and
- 13.9. with a written order to assign a specialist with the appropriate qualifications (hereinafter – responsible specialist), who is responsible for the technical condition of the crane, and the safe use and maintenance thereof.

*[23 August 2005; 29 May 2007]*

13.<sup>1</sup> *[29 May 2007]*

*[23 August 2005; 29 May 2007]*

14. The possessor shall ensure a sufficient number of personnel to service the crane, who are trained and instructed in accordance with the regulatory enactments regarding labour protection, in the use of work equipment, and training in issues regarding labour protection taking into account the construction of the crane and the circumstances of use.

*[23 August 2005]*

15. If a crane operator is assigned for permanent work on a crane of the same type but other model, he or she shall require appropriate instruction and he or she shall acquire practical skills.

### **III. Assembly and Installation of Cranes**

16. A responsible specialist appointed by the crane possessor shall be responsible for safe assembly and disassembly of the crane in conformity with the requirements of the instructions of manufacturer and these Regulations.

17. In assembling or installing cranes which move on surface rail tracks the following safety requirements shall be observed:

17.1. next to the cranes operated from the ground a free passage shall be foreseen for the movement of the crane operator;

17.2. above premises occupied by people it is not allowed to install cranes where an electromagnet or grab is used as the load gripping device;

17.3. above premises it is permitted to use trolleys and devices for lifting (lowering) of loads through hatches fitted in the coverings only if the hatches are on one axis;

17.4. the distance between the crane elements and stacks on the horizontal plane may not be:

17.4.1. less than 0.7 m — in the height up to 2.0 m; and

17.4.2. less than 0.4 m — in the height of more than 2.0 m;

17.5. the distance from the floor level to the lowest elements of the crane shall be:

17.5.1. not less than 2.0 m — at the floor level; and

17.5.2. from 0.5 to 1.0 m — above the floor level.

*[23 August 2005]*

18. Upon installation of cranes on existing rail tracks (trestles), according to the instructions of manufacturer, the crane possessor shall calculate whether the relevant tracks will withstand the load created if cranes are concentrated in one span of the trestle in the most disadvantageous load combinations.

19. Crane rail tracks (except for the cranes which move on railway tracks) shall be constructed according to the design in accordance with the procedures prescribed by regulatory enactments.

20. Boom cranes shall be installed on an appropriately prepared area, taking into account the ground category and characteristics in accordance with the instruction for use of the crane.

21. It is not permitted to install a boom crane on unprepared ground or area the slope of which exceeds the maximum permissible slope specified in the documents for use.

### **III<sup>1</sup>. Repair or Reconstruction of Cranes**

21.<sup>1</sup> The replacement of the basic elements of the crane without changing the crane construction and technical characteristics, or the welding or replacement of the elements thereof the limit values of which are utilised in the strength calculations (hereinafter – repair), as well as the changing of the crane construction or work parameters (hereinafter – reconstruction) shall be permitted taking into account the essential harmlessness and safety requirements specified in regulatory enactments regarding the safety of machinery.

[29 May 2007]

21.<sup>2</sup> Prior to the resumption of the use of a crane after repair or reconstruction, the possessor shall ensure an exceptional technical inspection, which shall be performed by an inspection institution.

[29 May 2007]

21.<sup>3</sup> Crane elements shall be permitted to be welded by welders who have been issued welders certificates according to the procedures specified in regulatory enactments regarding the welding of metal materials and the procedures for the certification of defectoscopists in the regulated sphere.

[29 May 2007]

21.<sup>4</sup> Crane elements and welded joints shall have inspections according to appropriate applicable standards with non-destructive control methods in laboratories, which are accredited in conformity with the standard LVS EN ISO/IEC 17025:2005 “General requirements for the competence of testing and calibration laboratories” and the accreditation of which has been published in a notice in the newspaper *Latvijas Vēstnesis*.

[29 May 2007]

21.<sup>5</sup> All data regarding the repair or reconstruction of a crane, as well as inspections which have been performed in relation to repairs or reconstructions, shall be documented and shall be appended to the crane passport.

[29 May 2007]

### **IV. Technical Inspections of Cranes**

22. The inspection institutions on the basis of an application from the possessor of a crane or the authorised representative thereof shall perform an initial technical inspection, regular technical inspections, as well as exceptional technical inspections in the cases referred to in Paragraph 25 of these Regulations in accordance with the requirements of applicable standards.

[23 August 2005; 29 May 2007]

22.<sup>1</sup> The inspections institutions prior to the registration of a crane with the State Labour Inspection shall perform an initial technical inspection of the crane in the following scope:

22.<sup>1</sup>.1. inspection of the crane passport – the conformity of the data included therein to the manufacturer’s instructions indicated thereof and conformity to the requirements of these Regulations; and

22.<sup>1.2.</sup> a full technical inspection of the crane in accordance with Sub-paragraph 23.2 of these Regulations.  
[29 May 2007]

23. The inspection institutions shall carry out the following regular technical inspections of cranes:

23.1. partial technical inspection which shall include:

23.1.1. inspection and assessment of the crane in operation, by visual check of separate crane elements;

23.1.2. inspection of the state of metal constructions and joints of the crane (cracks; deformations; changes in the thickness of walls and diameter of screws and rivets due to corrosion and wear; other possible defects);

23.1.3. inspection of the condition of the hook and the suspension thereof (wear, cracks);

23.1.4. inspection of the state of cables and chains and the correctness of their fastening;

23.1.5. inspection of the state of pulley sheaves, axes and their fastenings, as well as jib fastenings;

23.1.6. inspection of the state of the electrical grounding and insulation, by determining the conformity of electric current flow resistance and insulation resistance values with the permitted limits;

23.1.7. inspection of the conformity of crane, counterweight, ballast and boom parameters, by comparing with the values specified in the documentation; and

23.1.8. inspection of the working of the safety devices of the crane; and

23.2. full technical inspection which shall include:

23.2.1. the partial technical inspection;

23.2.2. the static test with overload of 1.25 nominal loads or according to the instructions of manufacturer;

23.2.3. the dynamic test with overload of 1.1 nominal loads or according to the instructions of manufacturer; and

23.2.4. inspection of the condition of the rail track of the crane, except cranes which move along shared railways.

[23 August 2005]

24. The regular technical inspections shall be performed:

24.1. not less than once every three years or once a year after the registration of the crane with the State Labour Inspection — a full technical inspection;

24.2. not less than once a year after the registration of the crane with the State Labour Inspection — a partial technical inspection;

24.3. more often than specified in Sub-paragraphs 23.1 and 23.2 of these Regulations — in individual cases on the basis a technically substantiated instruction of the inspection institution.

[23 August 2005; 29 May 2007]

25. Exceptional full technical inspections of cranes shall be carried out in the following cases:

25.1. after the repeated assembly of a crane, which is related to the installation of the crane on a different site (relates only to registered cranes);

25.2. after transfer of a portal crane to a different place of work;

25.3. after repair or reconstruction of a crane; or

25.4. on the basis of request from the State Labour Inspection.  
[29 May 2007]

25.<sup>1</sup> The scope of the exceptional full technical inspection shall be determined by the inspection institutions in accordance with the requirements of the applicable standards.  
[29 May 2007]

26. Subsequent to the technical inspection the inspection institution shall make an entry in the crane passport and issue to the possessor the technical inspection report. If the crane conforms to the relevant requirements, the inspection institution shall affix a safety inspection mark of the dangerous equipment in a visible place (next to the manufacturer's data plate) on the inspected crane.  
[29 May 2007]

27. The possessor of the crane shall affix in a visible place on the crane information regarding the date of the next regular technical inspection, as well as the registration number and lifting capacity of the crane.  
[29 May 2007]

28. [29 May 2007]  
[23 August 2005; 29 May 2007]

29. [29 May 2007]  
[23 August 2005; 29 May 2007]

## **V. Safety of Use of Cranes**

30. When using cranes the following dangerous factors are possible:

30.1. mechanical factors:

30.1.1. instability during the movement of load and under the effect of external factors (for example, wind);

30.1.2. possible injuries of people with the moving parts of the crane, load or installations;

30.1.3. possible falling of people and objects from height as a result of the crane operation;

30.2. electrical factors:

30.2.1. dangerous effect of the electric current from metal constructions which have become energised; and

30.2.2. the step voltage effect in the area around the crane upon its coming into contact with high-voltage equipment.

31. A crane may only be operated by a crane operator but loads may be hooked or tied only by a slingman.

32. Before the commencement of work the crane possessor shall ensure instruction of the servicing personnel regarding safe use of the crane.



33. The crane possessor or the responsible specialist appointed by him or her shall pending the commencement of work introduce the crane operator and slingers with the specific tasks and the minimum safety requirements to be complied with in the course of work.

*[29 May 2007]*

34. Before the commencement of work time shall be foreseen for the crane operator to inspect the potential damage of the crane and safety devices. The crane operator shall record the information on the inspection in the shift logbook.

35. Before the commencement of work under conditions of increased danger the crane possessor shall ensure instruction of the servicing personnel regarding safe performance of work and issue to the crane operator an assignment for work with a crane under conditions of increased danger.

36. Conditions of increased danger are the following:

- 36.1. the use of a crane in the protective zone of a transmission line;
- 36.2. the movement of dangerous loads with the crane (for example, highly inflammable liquids, and explosive substances);
- 36.3. the movement of load with the crane above premises occupied by people;
- 36.4. the movement of load with several cranes simultaneously;
- 36.5. working with a crane under contact wires of electrical transport;
- 36.6. the work on the rail track of a bridge crane; and
- 36.7. the work with a crane in a restricted movement zone.

37. If work with a crane is to be carried out in the protective zone of a transmission line, the crane possessor may issue an assignment for work with a crane under conditions of increased danger only after receipt of appropriate permit from the possessor of the transmission line.

38. Under conditions of increased danger the work shall be carried out in accordance with a project or a technological map of work performance which contains a load slinging and movement scheme, the sequence of performance of the operations and instructions for the correct lifting and moving of the load.

39. Lifting and moving of loads with several cranes, as well as the work in the protective zone of a transmission line shall be managed by the specialist responsible for crane operation which has been appointed by the crane possessor.

40. When working with a crane under contact wires of electrical transport a mechanical boom lift stop shall be installed on the crane so that the distance between the tip of the boom and the wire is not less than one metre.

41. When lifting the load the lifting wire ropes shall be in a vertical position (it is not permitted to draw closer the load which is located aside).

42. When moving the load it shall be lifted in the height of at least 0.5 m above the installations, load stacks, rolling stock and other similar obstacles in the movement route.

43. When slinging and moving the load verbal communication, sound signals, sign language or wireless communication means may be used in accordance with the labour protection requirements prescribed by regulatory enactments.

44. If the zone of operation of a crane is not in full view from the operator's control post and there are no radio or telephone communications, a signal man shall be appointed.
45. The slingman and the signal man shall be provided with visible distinguishing signs.
46. The load lifting and movement site shall be sufficiently illuminated. During heavy showers, snowstorms and fog, as well as if the strength of wind exceeds the limits specified in the crane documentation, the work with the crane shall be terminated.
47. In the work it is allowed to use only auxiliary load gripping devices and containers of appropriate lifting capacity which have been labelled in accordance with the procedures prescribed by regulatory enactments. It is prohibited to use damaged auxiliary devices and containers.
48. When using a crane the mass of the load to be lifted may not exceed the lifting capacity of the crane (taking into account the characteristic curve of the load lifting).
49. For the movement of people, melted metal, poisonous and explosive substances, pressure equipment and pressure containers it is prohibited to use cranes the lifting mechanism of which is operated by a friction or cam clutch.
50. A crane the load gripping device of which is an electromagnet or automatic grab may be used for the movement of loads only if overload is not possible.
51. For a boom crane only such buckets may be used the mass of which together with concrete does not exceed 90 percent of the lifting capacity of the crane (in conformity with the performance). The lifted bucket shall be unloaded steadily. Instantaneous unloading of the bucket is prohibited.
52. It is permitted to carry out work involving people going out to surface rail tracks from a bridge crane or the gallery of a bridge crane only if measures have been taken for the prevention of the dangerous factors referred to in Paragraph 30 of these Regulations.
53. A boom crane shall be so installed that during the operation thereof the distance between the furthest protruding element of the turning part of the crane and structures, load stacks and other obstacles is not less than one metre.
54. If a crane has to be installed on outriggers, it shall be installed on all outriggers. Appropriate pallets shall be placed under the outrigger feet.
55. It is prohibited for the operator to be in the crane cab when installing and releasing the outriggers of the crane, except for the cases when the outriggers are installed automatically from the cab.
56. When organising load lifting and moving works the possessor shall be responsible for the compliance with the following minimum safety requirements:
- 56.1. persons without direct relation to the work to be performed may not be on the load lifting and moving site, as well as on cranes;

56.2. mounting of bridge cranes or movable jib cranes and dismounting thereof is only permitted from a mounting platform or from a gallery intended for walking;

56.3. if during inspection and repair of the rail track and metal constructions of a bridge crane, as well as during adjustment of mechanisms and crane electrical equipment it is necessary to walk out on the bridge surfacing of the bridge crane, the main knife switch shall be switched off and a sign shall be put on *Neieslēgt – strādā cilvēki* [do not switch on – people working];

56.4. for the hooking of the load to be lifted slings shall be used which conform to the weight of the load to be lifted and the number of forks and the tilt angle shall be taken into account. Wire ropes or chains of slings shall be so long that the angle between their forks does not exceed 90°;

56.5. small unit load shall be lifted and moved in a specifically foreseen container in order to prevent separate units from falling;

56.6. bricks and light blocks which are stacked on pallets without fastening may be lifted only in the case if means of transport are loaded or unloaded and there are no people in the load moving zone;

56.7. when lifting a load it shall first be lifted in the height of not more than 0.2-0.3 m and briefly stopped in order to examine the correctness of its hooking and tying, the crane stability and the operation of brakes;

56.8. when lifting and lowering a load which is located in the proximity of a wall, column, stack, railway wagon, workbench or other obstacles there may not be people between the load to be lifted and the obstacles referred to;

56.9. the slingman may stand beside the load during its lifting or lowering if the load is not higher than one metre from the plane of the area on which the slingman stands;

56.10. when moving a boom crane with lifted load the position of the boom and the load of the crane shall be determined in accordance with the manufacturer's instruction;

56.11. the load moved by a crane may be lowered and unloaded only in places intended and prepared for the specific purpose;

56.12. pallets shall be necessary in the load deposition place so that slings and chains may be easily and without damage pulled from under the load;

56.13. in open wagons, trolleys, cars and on platforms the load shall be so loaded that the balance is not lost and application of slings is easy and safe when unloading the load. Spacers shall be used for this purpose;

56.14. it is prohibited to load or unload trucks and open wagons if there are people in the load bin or cab of the truck or in the open wagon, except for the case when the floor area of the open wagon is in good view from the cab, the load is not moved above the truck cab and the slingers may step back in a safe distance from the load or to go on a safety catwalk;

56.15. people are prohibited to stay in trucks, open wagons and platforms if loading or unloading takes place with cranes fitted with an electromagnet or automatic grab;

56.16. people working with the electromagnet or automatic grab are prohibited from staying in the dangerous zone of crane operation;

56.17. it is prohibited to use automatic grab for work for which the automatic grab is not intended;

56.18. during work breaks the load may not be in a lifted position. It must be lowered and the knife switch which is located in the crane operator's cab or the main switch must be switched off and locked; and

56.19. when terminating the work with a portal crane, tower or gantry crane, the control cab shall be locked and the crane shall be fastened to the rails together with all safety devices located thereon (rail vices).

57. When working with cranes it is prohibited:

57.1. for people who are not directly involved in the work to be performed to be in the outreach of the boom;

57.2. to lift a load which is in an unstable position or a load hooked on one fork of a two-forked hook;

57.3. to lift and move people, as well as to lift and move a load on which are people;

57.4. to lift a load which is covered by soil, which is frozen to the ground or which is otherwise constrained;

57.5. to pull out with a crane the slings, wire ropes or chains pressed by the load;

57.6. for a slinger to even with his or her weight the load to be lifted or moved, as well as to arrange slings if the load is in a lifted position;

57.7. to pass the load in window openings and on balconies if special load acceptance platforms have not been created or cranes of special construction are not used for this purpose;

57.8. to use limit switches for automatic stopping of crane mechanisms, except for the cases when a bridge crane drives to the mounting platform;

57.9. to work with a crane if safety devices and mechanisms are damaged; and

57.10. to operate crane mechanisms if there are people on the crane outside its cab (in the gallery, on the bridge, on the boom, in the machinery room or elsewhere), except for the persons who inspect and adjust mechanisms and electrical devices. Mechanisms shall be operated according to the signal of the person performing inspection or adjustment.

*[23 August 2005]*

57.<sup>1</sup> When putting out fires and performing rescue operations, the requirements referred to in Sub-paragraphs 57.1, 57.2 and 57.4 of these Regulations need not be applied.

*[29 May 2007]*

58. A boom crane may be installed in the proximity of trenches or foundation pits in conformity with the distances specified in Annex 4 of these Regulations. If the distances referred to may not be observed, the edges shall be secured in accordance with the appropriate construction standards.

*[23 August 2005]*

59. It is prohibited to install cranes on unprepared ground, as well as on a site the slope of which is greater than that specified in the crane documentation.

60. The operation of a crane shall not be allowed in the following cases:

60.1. if the technical inspection has not been carried out within the term specified or the crane has defects or damage;

60.2. if safety and signalling devices are damaged; or

60.3. if the service life (resource) of the crane specified by the manufacturer has ended.

*[23 August 2005; 29 May 2007]*

## **VI. Supervision and Control of Cranes**

60.<sup>1</sup> The supervision and control of the implementation of the requirements of these Regulations shall be performed by the State Labour Inspection.

*[29 May 2007]*

60.<sup>2</sup> The State Labour Inspection in performing the control of a crane during its use shall cancel the crane use permit if it is determined that:

60.<sup>2</sup>.1. the operation of the crane is not permitted in accordance with Paragraph 60 of these Regulations; or

60.<sup>2</sup>.1. the possessor has not assigned a responsible specialist in accordance with Sub-paragraph 13.9 of these Regulations.

*[29 May 2007]*

## **VII. Final Provisions**

*[29 May 2007]*

61. *[29 May 2007]*

61.<sup>1</sup> Inspection institutions, which are accredited up to 31 August 2005 in accordance with the standard LVS EN 45004:1995 “General criteria for the operation of various types of bodies performing inspection”, which perform inspections, are entitled to perform technical inspections of cranes up to the end of the time period indicated in the accreditation certificate.

*[23 August 2005]*

62. These Regulations shall come into force on 1 July 2000.

Prime Minister

A. Šķēle

Minister for Welfare

R. Jurdžs

## Sample of Crane Passport

(passport cover)

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(name of crane)

**PASSPORT**  
(first page)

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(state in which the crane was manufactured)

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(name of manufacturer)

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(name, type, model of crane)

Number of the crane allocated by the manufacturer \_\_\_\_\_

### I. General Information

Supplier/installer and the address thereof	
Type and model of the crane	
Crane index	
Year of manufacture of the crane	
Service life (resource) of the crane in years	

Note. In transferring or leasing the crane to another possessor, this passport shall also be transferred.

(new page)

### II. Characterisation of the Crane

1. Application \_\_\_\_\_

## 2. Performance \_\_\_\_\_

(normal, explosion-proof, north)

### 3. Work regime of the mechanism:

- 3.1. main stage \_\_\_\_\_ ;
- 3.2. auxiliary stage \_\_\_\_\_ ;
- 3.3. jib lift \_\_\_\_\_ ;
- 3.4. crane movement \_\_\_\_\_ ;
- 3.5. trolley movement \_\_\_\_\_ ;
- 3.6. turning of crane \_\_\_\_\_.

### 4. Lifting capacity:

- 4.1. main stage \_\_\_\_\_ t;
- 4.2. auxiliary stage \_\_\_\_\_ t.

Note.

For jib type cranes the lifting capacity measures of characteristics shall be indicated (diagrams or tables regarding the height of the lifting capacity and movement depending upon the crane's jib span).

### 5. Lifting height:

- 5.1. main hook \_\_\_\_\_ m;
- 5.2. auxiliary hook \_\_\_\_\_ m.

### 6. Lifting speed:

- 6.1. main hook \_\_\_\_\_ m/min;  
(normal, small)
- 6.2. auxiliary hook \_\_\_\_\_ m/min;  
(normal, small)
- 6.3. jib \_\_\_\_\_ m/min.

### 7. Crane speed of movement:

- 7.1. work \_\_\_\_\_ m/min;
- 7.2. transport \_\_\_\_\_ m/min;
- 7.3. towing \_\_\_\_\_ m/min;
- 7.4. trolley speed \_\_\_\_\_ m/min;
- 7.5. crane turning platform turning speed \_\_\_\_\_ rpm.

### 8. Crane span \_\_\_\_\_ m.

### 9. Stability coefficient:

- 9.1. loads, taking into account all additional loads \_\_\_\_\_;
- 9.2. loads without additional loads \_\_\_\_\_;
- 9.3. self-stability \_\_\_\_\_.

### 10. Crane weight (full mass) \_\_\_\_\_ t.

### 11. Wight of main components of the crane:

- 11.1. bridge \_\_\_\_\_ t;

11.2. trolley with mechanisms \_\_\_\_\_ t;  
 11.3. portal \_\_\_\_\_ t;  
 11.4. tower \_\_\_\_\_ t;  
 11.5. jib and changeable elements of the jib \_\_\_\_\_ t;  
 11.6. counterweights \_\_\_\_\_ t;  
 11.7. ballast \_\_\_\_\_ t.

12. Crane:

12.1. wheel load on rail \_\_\_\_\_ t or load on axle \_\_\_\_\_ t;  
 12.2. pressure of caterpillar track on the ground \_\_\_\_\_ kg/cm<sup>2</sup>;  
 12.3. load on outriggers \_\_\_\_\_ t.

13. Distance from the head of the rails to the floor (bridge cranes) \_\_\_\_\_ mm.

14. Lifting mechanism measures of characteristics

Place of installation of the mechanism	Carriage type	Drum diameter (mm)	Polyspast pulley sheave diameter (mm)	Balancing pulley diameter (mm)	Number of polyspast branches	Efficiency coefficient of polyspast
14.1. main stage						
14.2. auxiliary stage						
14.3. jib lift						

15. Hydro-pumps and hydro-motors

15.1. application	
15.2. number	
15.3. type and conditional description	
15.4. allowable momentum (Nm)	
15.5. work liquid nominal pressure (increasing pressure) (Pa)	
15.6. nominal productivity (consumption) (l/min)	

16. Hydro-cylinders

16.1. application	
16.2. number	
16.3. type and conditional description	
16.4. push rod diameter (mm)	
16.5. piston stroke (mm)	



16.6. load (kN) (T)	
16.7. work liquid nominal pressure (increasing pressure) (Pa)	

#### 17. Brake measures of characteristics

Place of installation of the mechanism	Number	Type (band, chock, normally open, normally closed, operated, automatic)	Electromagnetic type, hydro-boost type	Braking reserve coefficient	Stopping distance (mm)
17.1. main stage					
17.2. auxiliary stage					
17.3. crane movement					
17.4. trolley movement					
17.5. jib lift					
17.6. jib lift					
17.7. crane turning					

#### 18. Safety devices:

18.1. limit switch \_\_\_\_\_;  
(for example, gripping devices, lifting height, restriction of jib turning, carrier movement final state)

18.2. limiters \_\_\_\_\_;  
(momentum caused by load, lifting capacity, tipping)

18.3. ant-theft devices \_\_\_\_\_;

18.4. blocking devices \_\_\_\_\_;  
(for example, hatch, handrail disassembly parts, cabin doors)

18.5. indicators \_\_\_\_\_;  
(for example, jibs, hook state, counterweights, slope)

18.6. signalling devices \_\_\_\_\_;

18.7. anemometer \_\_\_\_\_.

19. Type of engine \_\_\_\_\_.  
(electric, combustion engine, steam)

#### 20. Type of electric current and voltage

Chain	Type of current	Voltage (V)
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20.1. power		
20.2. operation		
20.3. work illumination		
20.4. repair illumination		

21. Place of operation:

21.1. using the crane \_\_\_\_\_;

21.2. assembling and inspecting the crane \_\_\_\_\_.

22. Crane is permitted to be used if:

22.1. wind pressure is \_\_\_\_\_ kgf/m<sup>2</sup>;

22.2. calculated wind speed up to 10m in height is \_\_\_\_\_ m/s;

22.3. air temperature is not less than minus \_\_\_\_\_ °C;

22.4. installation slope (construction to which the jib is attached in relation to the horizontal plane) is \_\_\_\_\_ degrees.

23. Characterisation of wire ropes

Use of wire rope	Construction of wire rope	Diameter of wire rope (mm)	Resistance of wire (kg/mm <sup>2</sup> )	Breaking load limit of wire rope (kg)	Wire rope branch calculation load (kg)	Length of wire rope (m)	Strength reserve coefficient
23.1. load in the main stage							
23.2. load auxiliary stage							

24. Characterisation of gripping devices:

24.1. hook<sup>1</sup>

	Main stage	Auxiliary stage
Standard		
Number of the hook in conformity with the standard		
Lifting capacity (t) <sup>2</sup>		
Number of the hook allocated by the manufacturer		

Notes.

<sup>1</sup> completed in accordance with manufacturer's documentation.

<sup>2</sup> completed taking into account the work regime of the crane.

24.2. automatic grab:

24.2.1. the material the automatic grab is intended to handle \_\_\_\_\_;

24.2.2. volume \_\_\_\_\_m<sup>3</sup>;

24.2.3. maximum weight of the grabbed material \_\_\_\_\_t/m<sup>3</sup>;

24.2.4. unladen weight \_\_\_\_\_t;

24.2.5. manufacturer \_\_\_\_\_;

24.2.6. Number of the automatic grab allocated by the manufacturer \_\_\_\_\_;

24.3. load electro-magnet:

24.3.1. type \_\_\_\_\_;

24.3.2. unladen weight \_\_\_\_\_t;

24.3.3. lifting load for metal cuttings \_\_\_\_\_t;

24.3.4. lifting load for pig iron ingots \_\_\_\_\_t;

24.3.5. lifting load for bars \_\_\_\_\_t;

24.3.6. lifting load for semi-finished or plates \_\_\_\_\_t;

24.3.7. manufacturer \_\_\_\_\_;

24.3.8. Number of the load electro-magnet allocated by the manufacturer \_\_\_\_\_.

25. Information regarding the main elements of the crane construction

Standard	Grade of steel	Elements, which are made from the relevant grade of steel	Electrodes, welded wire (type, grade)

26. Instructions for the installation of rail track under the crane for gantry, portal and tower cranes<sup>1</sup>:

26.1. width of rail track \_\_\_\_\_mm;

26.2. type of rail \_\_\_\_\_;

26.3. type of cross-tie \_\_\_\_\_;

26.4. cross-sectional area \_\_\_\_\_mm;

26.5. distance between cross-ties \_\_\_\_\_mm;

26.6. rail fastening:

26.6.1. between themselves \_\_\_\_\_;

26.6.2. to the cross-tie \_\_\_\_\_;

26.7. existence of a tray between the rails and the cross-ties, construction and type of installation of the tray \_\_\_\_\_;

26.8. gap between the rail joints \_\_\_\_\_mm;

26.9. material of the ballast layer \_\_\_\_\_;

26.10. dimensions of the ballast layer:

26.10.1. width \_\_\_\_\_mm;

26.10.2. thickness \_\_\_\_\_mm;

- 26.11. radius of curvature of the rail track curves \_\_\_\_\_m;  
 26.12. maximum tolerances:  
 26.12.1. slope of rail track \_\_\_\_\_mm;  
 26.12.2. one rail in relation to another \_\_\_\_\_mm;  
 26.13. tolerances:  
 26.13.1. width of rail track \_\_\_\_\_mm;  
 26.13.2. rail height joints \_\_\_\_\_mm;  
 26.14. installation of the rail track on the ground\_\_\_\_\_.

Note.

<sup>1</sup> This paragraph need not be filled in, but a sketch of the rail track in which is indicated the parameters specified in this paragraph submitted instead. Tower rail tracks utilised in construction may be installed in conformity with instructions, which regulate the performance of the referred to work.

27. Supplier or possessor of the crane \_\_\_\_\_  
 (signature and full name)

place for seal

\_\_\_\_\_.\_\_\_\_\_20\_\_\_\_\_

(new page)

28. Information regarding location of the crane

Name of the possessor of the crane	Location of the crane	Date of installation

(new page)

29. Regarding the responsible specialist for the technical condition of the crane

Number of order and date of issue	Position, given name, surname	Signature

(new page, provide not less than two page for the recording of relevant data)

30. Information regarding repair of the metal construction of the crane, replacement of mechanisms, wire ropes and gripping devices

Date	Information regarding repair and replacement	Responsible specialist for the technical condition of the crane (signature)

(new page, provide not less than 10 page for the recording of relevant data)

31. Information regarding inspections performed

Date of inspection	Results of inspection	Date of next inspection

(new page)

32. The following documents are bound as an Annex to the passport (for example, technical drawings of the crane with the main measurements; kinematics diagram of the crane's mechanism; wire rope (chain) fastening diagram; the principle electricity diagram of the crane, with includes signalling and illumination circuits, as well as indications regarding the installation of earths; drawings of the placement of counterweight and ballast (tower cranes); bridge and mobile console type crane installation technical drawings in which is indicated the main measurements, mounting area and location of trolleys; a statement that the rail track is intended and calculated for the crane or for cranes, which move along above-ground rail tracks; a certification that the assembly has been performed in conformity with manufacturer's requirements (for bridge, gantry, tower or portal cranes); instructions for assembly and use of the crane in the official language; hydraulics diagram):

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### 33. Registration of the crane

Crane registration number with the State Labour Inspection \_\_\_\_\_.

The passport has \_\_\_\_\_ numbered pages, an Annex with \_\_\_\_\_ pages, altogether \_\_\_\_\_ bound pages.

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(Signature and full name of official of the State Labour Inspection)

place for a seal

\_\_\_\_\_.\_\_\_\_\_20\_\_\_\_\_

### Instructions regarding use of the passport

1. If necessary the passport may be added to with additional columns and concrete information regarding the crane.

2. Recommended format of the passport 218 x 290 (210 x 297) mm.

[23 August 2005]

**Assignment**  
**For Work with a Crane under Conditions of Increased Danger**

Issued to the crane operator \_\_\_\_\_,  
(given name, surname)

who with a brigade of \_\_\_\_\_ people has been assigned for the performance of the following work:

\_\_\_\_\_  
(nature and volume of work)

In order to perform the work referred to the workers must be provided with technical means for their protection, as well as the following organisational technical measures are necessary:

\_\_\_\_\_  
\_\_\_\_\_

Work must be commenced \_\_\_\_\_  
(year, day, month, hour)

Work must be finished \_\_\_\_\_  
(year, day, month, hour)

The assignment has been issued by the crane possessor

\_\_\_\_\_  
(name, position, signature and full name of the responsible official)

\_\_\_\_\_ (date) \_\_\_\_\_

I have been acquainted with the conditions of work and I have received the assignment:

\_\_\_\_\_  
(signature of the crane operator)

\_\_\_\_\_ (date) \_\_\_\_\_

*Notes.*

1. The assignment shall be filled out in two copies: one copy shall be issued to the crane operator, the other shall be kept by the crane possessor.

2. Work in the protective zone of a transmission line shall be directly managed by the specialist responsible for the supervision of the correct operation of the crane.

*[23 August 2005]*

Minister for Welfare

R. Jurdžs

**Service Life of Cranes in Years if not Specified by the Manufacturer** [29 May 2007]  
*[23 August 2005; 29 May 2007]*

Minister for Welfare

R. Jurdžs



**Minimum Crane Installation Distances from Edges of Trenches and Construction Pits  
(if Edges are not Secured)**

Trench depth (metres)	Distance* (metres) from the beginning of the slope to the closest outrigger depending on the type of ground (not strewn)				
	sand	loam	sandy loam	clay	dry loess
1	1.50	1.25	1.00	1.00	1.00
2	3.00	2.40	2.00	1.50	2.00
3	4.00	3.60	3.25	1.75	2.50
4	5.00	4.40	4.00	3.00	3.00
5	6.00	5.30	4.75	3.50	3.50

\* The distance shall be measures from the top of the trapezium forming the configuration of the trench or construction pit.  
*[23 August 2005]*

Minister for Welfare

R. Jurdžs