PUBLIC COMPANY ORLEN LIETUVA
DIRECTOR OF QUALITY, LABOUR SAFETY AND ENVIRONMENTAL CONTROL

ORDER
REGARDING APPROVAL OF OCCUPATIONAL HEALTH AND SAFETY PROCEDURE BDS-33 OPERATION AND SERVICING OF LIFTING CRANES

14 October 2020, No TV1(1.2-1)- 514
Juodeikiai Village, Mažeikiai Distr. Municipality

In exercise of the right granted by the 27 September 2017 Order No TV1(1.2-1)-327 of General Director of Public Company ORLEN Lietuva (hereinafter – the Company), I hereby:

1. A p p r o v e Occupational Health and Safety Procedure BDS-33 'Operation and Servicing of Lifting Cranes' (hereinafter – the Procedure, attached).
2. E s t a b l i s h that the Procedure approved hereby shall come into effect on 10 November 2020.
3. A s s i g n managers of organizational units of the Company listed in the distribution index hereof (attached) to additionally instruct, by 9 November 2020, the concerned employees on the Procedure approved hereby.
4. C o n s i d e r the following to be no longer effective from the effective date of the Procedure approved hereby:
4.1. the 26 November 2013 Order No.TV1(1.2-1)-433 of Director of Quality, Labour Safety and Environmental Control and Occupational Health and Safety Procedure BDS-33 'Operation and Servicing of Lifting Cranes' approved by the said order;
4.2. the 28 June 2018 Order No TV(1.2-1)-270 of Director of Quality, Labour Safety and Environmental Control 'Regarding Amendment to Occupational Health and Safety Procedure for Contractors BDS-33 'Operation and Servicing of Lifting Cranes'.
5. A s s i g n the responsible employee of Executive Office to distribute this Order to the employees listed in the distribution index hereof.

Director of Quality, Labor Safety and Environmental Control Saulius Pocevičius

Prepared by
Control and Prevention Group Manager
Egidijus Luomanas
2020-10-13

Document owner
Director of Quality, Labour Safety and Environmental Control
Saulius Pocevičius

AGREED WITH

Translated from Lithuanian by
Senior Translator Laima Venskavičienė

PUBLIC COMPANY ORLEN LIETUVA

APPROVED BY
14 October 2020
Order No TV1(1.2-1)-514 of
Director of Quality, Labour Safety
and Environmental Control

OCCUPATIONAL HEALTH AND SAFETY PROCEDURE BDS-33 OPERATION AND SERVICING OF LIFTING CRANES

I. GENERAL PROVISIONS

Purpose and Scope of Application

1. Occupational Safety and Health Procedure BDS-33 *'Operation and Servicing of Lifting Cranes'* (hereinafter, the Procedure) aims at defining the occupational health and safety requirements for servicing and operating lifting cranes and crane equipment in Public Company ORLEN Lietuva (hereinafter, the Company).

2. This Procedure shall apply to all employees of the Company and its contractors (to the extent required by a contract concluded between the Company and a contractor) operating the lifting cranes and involved in their servicing.

II. REFERENCES

3. This Procedure has been developed in line with the effective revisions of the following documents:

3.1. Regulations on Safe Operation of Lifting Cranes approved by the Minister of Social Security and Labor of the Republic of Lithuania;

3.2. Recommendations on Operation of Lifting Cranes approved by the Chief State Labor Inspector of the Republic of Lithuania;

3.3. Safety Rules for Operation of Electric Equipment approved by the Minister of Energy of the Republic of Lithuania;

3.4. Law of the Republic of Lithuania on Supervision of Potentially Hazardous Installations.

III. TERMS AND DEFINITIONS

4. The terms used herein shall be defined as follows:

Expert – a representative of the notified body for inspection of technical condition of potentially hazardous installations authorized to inspect the technical condition of lifting cranes.

Notified body for inspection of technical condition of potentially hazardous installations (hereinafter, the **accredited body**) – a legal entity established in the Republic of Lithuania, a legal entity or other organization established in another Member State of the European Union or the European Economic Area, or branch thereof established in the Republic of Lithuania or another Member State, recognized by accreditation bodies as competent to inspect the technical condition of potentially hazardous installations [3.4].

Lifting crane (hereinafter, the **crane)** – a type of lifting machine that can be used to lift and move the loads suspended on a hook or any other device for grabbing and lifting loads.

The cranes according to their configuration may be as follows:

Bridge (overhead) crane – a type of crane with its lifting component (hoist) traveling along the bridge beam. The bridge (that includes a beam or runways) may move or be rigidly supported (fixed). Mobile bridge travels along a rail and may be mounted directly on a chassis or vertical supports with a chassis, or may be of mixed type. Fixed bridge is rigidly mounted to the supporting structures (e.g. of building);

Jib (boom) crane – a type of crane where a lifting component is fixed to a jib or a trolley traveling on a jib, e.g. truck mounted boom crane, crawler boom crane, tower crane, etc.;

Cable crane (with carrying ropes) – a type of crane with lifting device mounted to a trolley traveling on the rope stretched between two anchoring points.

Lifting equipment consists of lifting mechanisms (manual and electric hoists and winches, spreader beams, etc.), safety devices (load limiters, load moment limiters, crane mounting devices, etc.), lifting accessories (wire rope and chain slings, synthetic slings, lifting chains, lifting hooks, etc.).

Crane lifting capacity – the maximum lifting load of a crane (it includes the weight of a clamshell bucket, electromagnet, spreader and other detachable lifting accessories).

Crane repairs – replacement of broken or otherwise unusable parts and assemblies with equivalent parts or assemblies, or repair thereof without altering the crane technical characteristics. Crane modification works are not considered maintenance.

Crane modification – actions to change the crane technical characteristics, e.g. replacing the drive, increasing the width of opening, extending the boom length, increasing of the lifting height, reinforcing the crane to increase its lifting capacity, when such alterations have not been included into the crane technical documentation, also other cases of technical modifications that may cause load changes in crane assemblies and structural elements, crane stability and rigidity. Modification is not a technical maintenance action.

Crane Maintenance Specialist shall mean, for the purposes of this Procedure, Engineer of Equipment Technical Supervision and Materials Analysis Group of the Company's Mechanical Department, holding a Crane Maintenance Foreman Certificate and assigned, by decree of Equipment Technical Supervision and Materials Analysis Manager, to perform maintenance of the Company's lifting equipment.

Crane Maintenance Foreman – an employee of the Company who is subordinate to Director of Maintenance, holds a Crane Maintenance Foreman Certificate and is assigned, by decree of Director of Maintenance, to organize and coordinate maintenance and repairs of lifting equipment of a relevant organizational unit.

Crane Supervisor – a person trained under the Lifting Crane Supervisor Training Program, having adequate knowledge and skills and holding a Crane Supervisor Certificate. Crane Supervisor shall be assigned by a regulatory document issued by a person responsible for execution of works on site where crane operation is required. Depending on the decision of the owner of a self-propelled crane (i.e. truck-mounted, crawler, wheeled crane or crane with special undercarriage), duties of Crane Supervisor for simple loading/unloading jobs may be assigned to a Crane Operator holding a Crane Supervisor Certificate.

Crane Operator – a person trained under the Crane Operator Training Program, having adequate knowledge and skills of operating certain type cranes, and holding a Crane Operator Certificate with indication of a particular type of crane he/she is allowed to operate. If a Crane Operator is transferred to operate a crane of another type, e.g., from a tower crane to a bridge crane, prior training of Crane Operator and receipt of the relevant Crane Operator Certificate shall be required before the assignment.

Inspection of Crane Electric Parts – periodical inspection of the machine condition with various measuring devices being subject to control (when assembled), repairs and measurements with operating voltage on. If required, voltage of electrical motors, generators and other units may be disconnected, and sensors, measuring devices, etc. can be replaced. Partial repairs are made when no special disassembly works are required.

Rigger – a person trained under the Rigger Training Program, having adequate knowledge and skills, and holding a Rigger Certificate. Riggers perform load rigging and unrigging works. They shall be assigned by a regulatory document issued by a person responsible for execution of works on site where crane operation is required.

Signaler – a Rigger assigned by Crane Supervisor to ensure communication (by radio or using hand signals) with Crane Operator and to precisely direct the load, if Crane Operator is not able to see the whole path of the load being lifted neither directly nor using additional equipment. Functions of signaler may also be performed by Rigger provided that he/she can perfectly see the whole path of the load and is at all times seen by Crane Operator.

IV. DUTIES AND RESPONSIBILITIES OF EMPLOYEES

5. **Crane Maintenance Specialist shall:**

5.1. Following the procedure set forth in the effective Regulations on Safe Operation of Lifting Cranes [3.1], register and exclude from the register the Company-owned cranes, arrange inspections of crane technical condition in a due and timely manner, and participate in such inspections;

5.2. Develop schedules of crane technical inspections and repairs, and exercise control over their observance;

5.3. Immediately discontinue crane operation in case of any operation malfunctions, failures or other hazardous factors, and resume the operations only after elimination of the risk causes;

5.4. Participate in the commission for examination of the crane personnel knowledge;

5.5. Exercise control over execution of instructions given by a notified body expert or officers of other controlling authorities;

5.6. Participate in investigation of incidents (accidents, failures, etc.) related to crane operation and maintenance, and provide for measures to prevent such incidents in future;

5.7. Keep the crane-operation related documents (documents provided by the manufacturer, passports, operation manuals, results of technical inspections, etc.) and, if necessary, provide such to the employees involved in routine crane maintenance activities;

5.8. Provide Crane Maintenance Foremen and Crane Operators of the Company with the logbooks referred to in Attachments 1, 2, and 3 as well as exercise control over making records in such logbooks (this item shall not apply to crane owners of other companies as the Logbook format and required entries are determined by crane owner itself in view of the requirements of the Regulations on Safe Operation of Lifting Cranes [3.1]);

5.9. Draw up the list of the Company lifting cranes with indication of the main characteristics of each crane, and frequency of partial and full inspections of their technical condition.

6. **Director of Maintenance shall:**

6.1. Arrange for crane operation control and continuous supervision in each organizational unit of the Company where cranes are installed;

6.2. Appoint Crane Maintenance Foreman for each organizational unit of the Company where cranes are installed, by issuing a relevant decree, and oblige him/her to exercise crane operation control and continuous supervision of the cranes in a particular organizational unit;

6.3. Ensure routine crane maintenance, appoint/hire the employees (fitters, electricians) of adequate qualification, specially trained for this purpose, or outsource a company specialized in such activities and having the qualified personnel.

7. **Crane Maintenance Foreman shall:**

7.1. Ensure that the cranes, rail tracks and lifting accessories are in proper technical condition and used in line with the manufacturer' procedures, Recommendations on Operation of Lifting Cranes [3.2], and this Procedure;

7.2. Supervise crane assembly, maintenance progress and quality, ensure serviceability of crane lifting equipment, prepare crane for technical inspection, arrange routine crane maintenance, assess fitness of rail tracks for service;

7.3. Ensure timeliness of crane technical inspections, and participate in such inspections;

7.4. Ensure safety of routine crane maintenance works;

7.5. Fill in the crane passport;

7.6. Keep records of lifting accessories in accordance with the established procedure, carry out inspections, ensure proper storage and use of lifting accessories, and keep records in the Lifting Accessories Recording and Inspection Logbook (see Attachment 2). Where lifting accessories of the contractor are used, recording, inspections, storage and usage thereof shall be the responsibility of such contractor;

7.7. Observe and follow the instructions given by Crane Maintenance Specialist of the Company, a notified body expert, officers of other controlling authorities;

7.8. Discontinue or prevent commencement of the works involving crane operations in the following cases:

7.8.1. if the crane is not registered with the State Register of Potentially Hazardous Equipment;

7.8.2. if a non-certified crane operator was assigned, no riggers assigned or riggers not trained, or Crane Supervisor not assigned;

7.8.3. if a conclusion of a notified body on the crane fitness for safe use is not available;

7.8.4. if written instructions issued by a notified body expert or other controlling authorities have not been fulfilled;

7.8.5. in case of any cracks or other crane structure defects reducing the strength of structure and causing risk to health and safety;

7.8.6. in the event of non-acceptable wear and tear of hooks, wire ropes, chains;

7.8.7. if load lifting or boom reach changing mechanisms are out of order;

7.8.8. if brakes of load lifting or boom reach changing mechanisms are out of order;

7.8.9. if hook height limiter, nominal lifting capacity limiter, signaling devices, other safety devices are out of order, or there are other defects posing threat to health, environment, or property;

7.8.10. if Work Method Statement has not been prepared and agreed with the crane owner;

7.9. If during the crane routine maintenance, or crane technical inspection by a notified body, the possibility of crane accident is identified, or it is established that the crane poses a threat to health, life of employees and other individuals as well as property or the environment, to ensure that such crane is operated only after elimination of the defects identified;

7.10. Allow routine maintenance to be performed exclusively by the qualified employees (electricians, metal workers, etc. of adequate competences);

7.11. Take care that Crane Operators and employees involved in routine crane maintenance receive occupational safety and health procedures, read them and comply with the requirements set forth therein;

7.12. Ensure protection of crane steel structures against corrosion. Openings for water discharge from the closed cavities of crane must be open;

7.13. Verify the observance of work release and permit issuing procedure;

7.14. Make entries in chronological order in the Crane Routine Maintenance and Repair Logbook (Attachment 3) on routine maintenance activities, inspection results, repairs, accidents, failures, malfunctions, modifications, technical checks and other crane related activities.

8. **Crane Supervisor shall:**

8.1. Prior to commencement of works, make sure that all required technical inspections have been performed, and the crane is fit for operation;

8.2. Ensure planning, organization, coordination, execution and supervision of works involving crane operations;

8.3. Ensure compliance with the occupational health and safety requirements while planning, executing and supervising all lifting operations;

8.4. Identify and initiate preparation of the documents required for lifting works (Work Method Statements, crane setup, load rigging, lifting schemes, etc.);

8.5. Check the certificates of Crane Operator, Riggers, verify entries in the Crane Inspection Logbook (Attachment 1);

8.6. Assign the required number of Riggers and, if necessary, Signalers, and establish the methods for exchanging signals between Riggers (Signalers) and Crane Operator (hand signals, verbal, by phone, radio, etc.);

8.7. Calculate the weight of the load to be lifted, and assess its dimensions;

8.8. Select the detachable load securing devices according to the weight and dimensions; do not allow using any lifting accessories without marking, or lifting accessories that do not correspond to the crane lifting capacity and load type. Make sure no defective, unmarked or non-inspected lifting accessories are kept on the work site;

8.9. Notify Crane Operator and Riggers of the weight and dimensions of loads to be lifted, the location and procedure of their storage;

8.10. Exercise control over compliance by Crane Operators and Riggers with the occupational health and safety requirements and, if necessary (e.g. after crane is relocated to other workplace, or Riggers or Crane Operator change, or loads are lifted under newly-developed rigging plans, or lifting works executed under work method statement, etc.), indoctrinate them on site about safe execution of the lifting works;

8.11. Make sure that Riggers secure the load properly, and no unauthorized persons stay on site;

8.12. Directly manage hazardous lifting works and lifting works carried out under the work method statement as well as works with no lifting plan available;

8.13. Fence-off the area of crane operation using warning barrier tape, place the warning signs and make sure that no unauthorized persons stay in the area during lifting operations;

8.14. Ensure that no suspended loads are left unattended, except for the cases when the load is securely suspended with application of adequate measures and no access under such suspended load is possible for people;

8.15. Prohibit crane operations outdoors, when weather conditions deteriorate to the point of jeopardizing safety and health of employees, take measures to prevent the crane collapse or movement, and lower the load safely to the relevant place;

8.16. For reversing of self-propelled cranes in the territory of process units or other territories of the Company where the risk of collision exists, Crane Operator must be assisted by an employee who shall stay in a safe place, clearly visible to Crane Operator, and show safe path by means of hand signs, verbally, or any other way agreed with Crane Operator, until the crane is safely parked;

8.17. Make sure that the self-propelled crane is properly parked;

8.18. When lifting works are carried out under Work Method Statement, familiarize employees with such statement against their signature;

8.19. Assign Rigger as a signaler to communicate (by radio or hand signals) with Crane Operator and precisely direct the load, if Crane Operator is not able to see the whole path of the load being lifted neither directly nor using additional equipment. Functions of signaler may also be performed by Rigger provided that he/she can perfectly see the whole path of the load and is at all times seen by Crane Operator.

9. **Crane Operator shall:**

9.1. Each day before commencing works, make visual inspection of the crane and perform an idle testing of its key mechanisms (safety devices and equipment, brakes) following the prescribed procedure. Crane Operator shall enter the crane inspection results into the Crane Inspection Logbook (see Attachment 1);

9.2. Not commence lifting works in the following cases:

9.2.1. cracks or deformations of the crane structural steel;

9.2.2. cracks in the boom (jib) suspension elements, absence of pins, clamps in wire rope fastening points, or they are disengaged;

9.2.3. the number of worn-out or broken wires of a rope exceeds the allowable limits; any of the strands is broken or damaged;
9.2.4. lifting (hoisting) mechanism has defects compromising the safe operation;
9.2.5. hook throat worn out more than 10% of the initial cross-section height, hook throat safety latch is out of order, hook fastening in the shackle is damaged;
9.2.6. no lifting capacity limiter and signaling device or they are out of order; in cranes with electric drive – no overwind cutout device;
9.2.7. additional supports are damaged or incomplete;
9.2.8. no safety covers for mechanisms, no electrical equipment insulation;
9.2.9. breaks are out of order.

9.3. Inform Crane Maintenance Foreman or Crane Supervisor about the defects detected during the inspection;

9.4. Not commence the lifting works in the absence of lifting plans or work method statement. Perform lifting works with the permission of Crane Supervisor only;

9.5. Leave the crane cabin only when additional supports are lowered or fixed, except for the cases when support control devices are located inside the cabin;

9.6. Prior to commencing the work on a self-propelled crane, lift the heaviest load, which is to be lifted without changing the crane position, to the height of 0.2–0.3 m, and assess the condition of soil. If the condition of soil may change in the course of work due to the changed weather conditions, the procedure described in this item has to be repeated;

9.7. Each time before lifting the load, lift it to the height of 0.2–0.3 m and make sure the breaks are reliable as well as make sure that Rigger checks the correctness of rigging;

9.8. Having finished or interrupted the work lower the load to the specified location; do not leave it suspended. Switch off and lock the blade switch located in the cabin, and/or electric power supply blade switch. Lock up the crane cabin after completion of works;

9.9. Lift or shift the load only following the signs given by Rigger and/or Signaler, and follow instructions given by Crane Supervisor;

9.10. Relocate loads from one place to another at the height no less than 0.5 m above the objects located in the path of the load;

9.11. Do not lift the load when its weight exceeds the crane lifting capacity, and do not derive from the crane operating conditions specified by manufacturer;

9.12. Prior to reversing with self-propelled crane, make visual check of the roads for any obstacles, taking into consideration the distances to them. Drive at maximum speed of 5 km/h and watch the surroundings carefully using side mirrors. In case of any doubt, stop, disembark and reassess the distance to obstacle. Reversing of self-propelled cranes is prohibited within the territory of process units or other territories of the Company where the risk of collision exists, if no assistance is available by an employee who, from the safe place clearly visible to Crane Operator, shows the safe path by means of hand signs, verbally, or any other way agreed with Crane Operator until the crane is safely parked;

9.13. Ensure that the loading and boom (jib) position of a crane moving with the suspended load is as specified in the operating procedure. If no indication is available in the operating procedure or the crane is moving without any load, the boom (jib) has to be positioned along the movement direction. Moving the crane and rotating its boom simultaneously shall be prohibited, except for rail-mounted grab bucket cranes operating on a straight track section;

9.14. Participate in technical inspections of the operated crane.

10. **Rigger shall:**

10.1. Check the marking of lifting accessories and condition of slings (for presence of an information plate specifying the sling lifting capacity, number and testing date, for presence of any mechanical damages, knots, twisting). If any defects or flaws are noticed, notify Crane Supervisor thereof;

10.2. Safely rig (strap) the load and attach it to the crane hook;

10.3. Before giving a signal to lift the load, Rigger shall make sure that the load is reliably secured, nobody is holding it, and the load may not bump into anything/anybody; make sure that there are no loose parts, tools, etc. on the load;

10.4. Make sure there are no people next to the load or between the load to be lifted and the surrounding walls, towers or other equipment, as well as the boom and the load lowering zone; Rigger himself must also leave the dangerous zone;

10.5. Check the correctness of rigging upon lifting the load by Crane Operator to the height of 0.2–0.3 m;

10.6. Use the established signaling system during the load-lifting operations;

10.7. Observe the load relocation and make sure that Crane Operator maintains the height of no less than 0.5 m above the objects located on the path of the load;

10.8. Meet the load when it is at no more than one meter height from the ground. When the load is suspended higher, Rigger has to use hooks or slings for its positioning. Load can be detached only when it reaches the ground and is stable. When lowering or lifting a load, the load cannot be pushed thus changing the load lowering or lifting trajectory from the vertical;

10.9. Prevent lifting of loads with their weight exceeding the crane lifting capacity. When the load weight is unknown, lifting of such weight is allowed only with Crane Supervisor's approval and under his/her direct supervision;

10.10. Perform the functions of Signaler as instructed by Crane Supervisor;

10.11. Signaler or Rigger, who is directly communicating to Crane Operator (verbally, by hand signs, radio or any other established method), has to wear a high visibility jacket.

V. CRANE OPERATION REQUIREMENTS. TECHNICAL INSPECTION

11. Cranes shall be assembled and operated following the requirements set forth in the manufacturer' documentation (operation manuals, procedures, etc.).

12. The crane in operation has to be appropriately marked, with indication of its type (make), registration number, lifting capacity (rated load), dates of completed and future technical inspections (sample of crane marking plate is provided in Attachment 4 hereto).

13. Prior to the commencement of operation, an entry shall be made in the crane passport with indication of the assigned Crane Maintenance Foreman (surname, and position). Such entry shall be made each time a new Crane Maintenance Foreman is assigned. When the assigned Crane Maintenance Foreman is on a sick leave, vacation, business trip, etc., the duties shall be performed by a substituting employee (his/her surname shall not be entered into the passport). Crane Maintenance Foreman shall be provided with proper conditions to perform his/her duties.

14. Crane can be operated only if its technical condition has been inspected and conclusion on its fitness for use submitted. Technical condition of a crane registered with the State Register of Potentially Hazardous Equipment shall be assessed and conclusion (Inspection Report) shall be submitted by a notified body expert. Technical condition of a crane not registered with the State Register of Potentially Hazardous Equipment shall be assessed and conclusion (Inspection Statement) shall be submitted by Crane Maintenance Foreman of the Company.

15. Crane has to be assessed by performing technical inspections:

15.1. Before operating the crane for the first time;

15.2. When non-self-propelled crane is relocated and assembled on a new site;

15.3. Periodical inspections of cranes registered with the State Register of Potentially Hazardous Equipment:

15.3.1. partial technical inspection (PTI) at least once in 12 months;

15.3.2. full technical inspection (FTI) at least once in 36 months; full technical inspection of cranes with low operation intensity (e.g., cranes used for equipment maintenance in power houses, machinery rooms, pump houses, compressor houses) shall be performed at least once in 60 months;

15.4. Periodical inspections of cranes not registered with the State Register of Potentially Hazardous Equipment:

15.4.1. PTI at least once every 12 months. Partial technical inspection of cranes with low operation intensity (e.g., cranes used for equipment maintenance in power houses, machinery rooms, pump houses, compressor houses) shall be performed at least once in 30 months;

15.4.2. FTI at least once every 36 months. Cranes with low operation intensity shall undergo FTI at least once in 60 months;

15.5. Unscheduled inspections shall be performed after an accident, impact of natural phenomena, modifications, repairs of supporting structures by means of welding, long-term downtime (exceeding 12 months).

16. PTI and FTI frequency for each Company crane is defined in the list of the Company cranes prepared by Crane Maintenance Specialist and approved by Director of Maintenance of the Company.

17. When operating a crane moving on rail track, regular supervision of the rail track is required. At the frequency established by the Company, rail track inspections shall be performed, which shall include verification of track straightness, leveling, springing low spots in the load zones and other measured deviations. Inspection and measurement reports shall be kept together with the crane operation documents.

18. Rail track inspections at the Company shall be performed:

18.1. Periodically as set forth in Attachment 5 hereto;

18.2. In case of any indications of existing/possible deviations from the allowable dimensions of rail track;

18.3. Upon reasonable request of a notified body expert, or Crane Maintenance Specialist of the Company.

VI. LIFTING OPERATION REQUIREMENTS

19. Access to the control cabins shall be allowed only from the access platforms or elevated walkways.

20. Small-sized loads shall be lifted and moved in a special packaging and stacked in a way to prevent them from falling. Small-sized loads can only be lifted in an orderly packaging designated for and ensuring safe lifting. Such works shall be directly supervised by Crane Supervisor.

21. Lifting and lowering the loads at the distance less than 2 m from a wall, tower, stack, vehicle or other equipment shall be allowed only in the absence of people (including Riggers) between the load and the mentioned objects.

22. Load lifting site has to be clearly visible. In case of poor visibility (insufficient lighting, thick fog, heavy snow or rain, etc.) the works shall be discontinued.

23. Lifted load shall be positioned on the specially prepared place only to ensure it stays in place securely and does not fall, turn over, or slide off. When strapped load (with no lugs) is lifted or lowered, it has to be lowered either after placing timber beams underneath or on special supports in order to be able to easily withdraw slings from under the cargo without damaging them. Pallets of adequate strength have to be placed in the load storage location.

24. Lifting and moving by crane shall be allowed only of the loads with their weight not higher than crane lifting capacity, provided that crane operating mode specified in manufacturer's operating procedures is not violated.

25. The following shall be prohibited during lifting operations:

25.1. Lifting of unmarked reinforced concrete and concrete items of more than 500 kg with no indication of their actual weight;

25.2. Lowering or lifting loads in vehicles with people inside the trailer and/or cabin;

25.3. Lifting or moving loads with people on or underneath them;

25.4. Lifting of people. People may only be lifted in special certified baskets (as set forth in standard LST EN 14502-1:2010 Cranes. Equipment for the lifting of persons - Part 1. Suspended baskets);

25.5. Lifting loads covered with soil or frozen, heaped with other loads, fastened with bolts or poured with concrete;

25.6. Dragging loads on the ground, floor or rail tracks attached to a crane hook when lifting ropes are inclined; pulling railcars, platforms, trolleys or carriages with crane hook without installing guiding pulleys holding lifting ropes in vertical position;

25.7. Pulling out by means of a crane the lifting equipment trapped by loads;

25.8. Pulling loads by hand during the lifting, moving or lowering operations; long and large loads must be positioned by means of hooks and slings (ropes) of adequate length;

25.9. Lowering loads through windows or balconies with no special access platforms installed or without special devices;

25.10. Using limit switches as operating devices for automatic cutout of mechanisms, except in the cases when bridge crane is approaching an access platform installed at the end of the building;

25.11. Working with safety devices and brakes malfunctioning or out of order;

25.12. Operating the crane under repairs;

25.13. Switching the crane mechanisms on when there are people on crane access platforms, in machine room, on the boom (jib), counterweight and other dangerous zones. Exception can be made for individuals, inspecting and adjusting crane mechanisms and electric equipment. In such case mechanisms must be switched on only upon the signal given by the person inspecting the equipment;

25.14. Operating a crane when weather conditions or other factors differ from those set in the crane operation documents. The adverse work conditions shall be reported by Crane Operator to Crane Supervisor.

26. Lifting works in the safety zones of electrical overhead lines may be performed only upon relevant instructions issued by the personnel operating the overhead lines, following the effective Safety Rules for Operation of Electric Equipment [3.3].

Additional Requirements for Lifting Operations executed by Contractor on Cranes of the Company

27. Cranes owned by the Company may be operated by contractors upon receipt of the work permit for lifting works:

27.1. For crane operation in non-explosive atmospheres, Maintenance Work Permit shall be obtained in accordance with the requirements set forth in Occupational Health and Safety Procedure BDS-6/2 'Works in Confined Spaces';

27.2. For operation of the cranes not suitable for use in explosive atmospheres, a hot works permit shall be obtained in accordance with the requirements set forth in Occupational Health and Safety Procedure BDS-7 'Hot Works'.

28. Employee issuing a permit may issue it only after having ascertained that an employee assigned by the contractor holds a valid Crane Supervisor Certificate and a valid Work Supervisor Certification Card.

29. Crane Maintenance Foreman shall issue a key to Work Supervisor or Crane Operator of the contractor for connecting electric circuit of an electric crane. After finishing the work, such key shall be returned to Crane Maintenance Foreman of the Company. Work Supervisor/Crane Operator of the contractor shall confirm the receipt of a key by signing on the Key Issue/Return Registration Logbook, whereas the return of a key shall be confirmed by the signature of Crane Maintenance Foreman in the said Logbook.

VII. LIFTING OPERATIONS PERFORMED UNDER WORK METHOD STATEMENT

30. Work Method Statement shall be prepared when:

30.1. Two or more cranes are located so that the areas of their operation overlap;

30.2. A load is lifted using few cranes;

30.3. Loads are being lifted over buildings (facilities) with people inside;

30.4. In case the manufacturer has presented no technical requirements for installation and erection of cranes.

31. Work Method Statement shall include the following:

31.1. Crane setup scheme;

31.2. Crane rated capacity, hook lifting height, boom (jib) reach, taking into consideration the conditions of construction, installation or other planned works;

31.3. Safe distances from engineering networks, power networks and power transmission lines, roads and pedestrian walkways, safe distances for crane approach to buildings and material storage places;

31.4. Crane positioning and operation conditions near excavations;

31.5. Sequence of crane operations;

31.6. Conditions and procedures for the safe operation of several cranes operating on one track or parallel tracks;

31.7. Load securing (rigging) charts;

31.8. Load storage place and dimensions, access roads, location and layout of safety and warning signs, etc.

32. Work Method Statement (when required) shall be prepared by the contractor that will perform the lifting works. Prior to the commencement of the planned works, Work Method Statement shall be coordinated with Occupational and Process Safety Control Manager, Chief Mechanical Engineer, and Chief Electrical and Automation Engineer of the Company.

VIII. LIFTING ACCESSORIES AND LOAD RIGGING REQUIREMENTS

33. Only certified lifting accessories may be used for lifting operations: they shall be certified by manufacturer and appropriately marked (serial number, lifting capacity and testing data shall be indicated on such accessory, or a plate attached to it).

34. When issuing lifting accessories for lifting works and periodically, at least once in 12 months, Crane Maintenance Foreman has to visually inspect them and enter the inspection results in Lifting Accessories Recording and Inspection Logbook (Attachment 2 hereto).

35. Crane hook shall be equipped with safety latches to prevent accidental detachment of the removable load securing device. Safety latch is required for both crane hook and sling hook.

36. Sling hooks shall be secured at the attachment points or load lifting lugs in a way to prevent slipping out or loosening, when ropes or chains are free of load. Lifting hook tip shall be placed into the load-lifting lug from the inside out. Hooks shall not be placed into small lugs (sufficient looseness should be kept between a hook and lug).

37. Slings and/or spreader beams shall be selected based on the load weight, number of rigging points and distance between them. When loads are lifted using the general-purpose slings, the angle between their legs should not exceed the angle indicated by a sling manufacturer and the lifted load manufacturer. Standard angle between the legs of general-purpose slings shall not exceed 90°.

38. Spreader beams shall be used for lifting of long loads, when lifting height is not big and also when the premises has low ceiling. When using spreader beams, lifting accessory tilt angle may be reduced or avoided. Load has to be kept under a spreader beam so as to avoid its overbending; projection of the load or its separate parts shall be also avoided. Furthermore, it is important to take into consideration the weight of the spreader beam itself and accordingly reduce the maximum weight of the load to be lifted.

39. Wire ropes, chains and lifting slings cannot be knotted, twisted, or pulled across sharp edges. It is necessary to use edge protection profiles or wire rope protective hoses.

40. Wire ropes shall be used for lifting loads with smooth, oily or slippery surface; whereas wire ropes with hooks shall be used for attaching a crane hook to load lifting lugs. Using the wire ropes for lifting sharp-edged and hot loads is prohibited. Only wire ropes of more than 8 mm diameter and natural and artificial fiber ropes of more than 16 mm diameter can be used as lifting accessories. Using the polyethylene ropes of orange color for lifting is prohibited.

41. Only standard ropes with standard end connections can be used for load rigging. Wire ropes should not be bent/twisted at the termination clamps/clips. Use of the wire ropes with broken strands, spreads, bends, dents, loops, corrosion deposits, cross-sectional changes, wire rupture spots, etc. is prohibited.

42. Chains must be used for lifting hot-surface loads, sharp-edged beams, girders or profiles. Chains with hooks shall be used for attaching the crane hook to load lifting lugs. Use of the chains for lifting loads with smooth or slippery surface is prohibited.

43. Chemical-fiber lifting slings and straps shall be used for lifting loads with extremely slippery or sensitive surface, e.g. rollers, shafts, varnished items:

43.1. Made of polyester – resistant to most acids and thinners, identifiable by a sewn blue label;

43.2. Made of polyamide with a sewn green label – alkali resistant;

43.3. Made of polypropylene with a brown label – with relatively low lifting capacity, however of high chemical resistance.

44. It is forbidden to use lifting slings and straps for lifting sharp-edged and hot loads. Lifting slings and straps can only be used in a way that their marked ends are attached in a crane hook.

45. Lifting accessories can be disengaged only when the load is safely positioned on the surface.

46. When the lifting operations are finished, idle and free of load attachment devices shall be left in a lifted-up position. Lifting accessories shall be safely removed and orderly arranged.

IX. STORAGE OF LOADS

47. Lifted load may be put down only on the specially prepared place to ensure it stays in place securely and does not fall, turn over, or slide off.

48. Pallets of adequate strength shall be placed in the storage location to be able to easily withdraw lifting accessories from under the load without damaging them.

49. Loads onto the vehicles shall be put in a way to ensure convenience and safety of attaching the lifting accessories for unloading. Inserts, containers, etc. have to be used for that purpose. Vehicles shall be loaded ensuring their proper load balance.

X. ROUTINE MAINTENANCE AND REPAIRS OF CRANES

50. Routine maintenance of cranes shall be carried out periodically within the scope and under the frequency set forth in Attachment 5 hereto.

51. Only persons of adequate qualification or specialized companies having qualified personnel shall be entitled to perform crane repairs and their routine maintenance.

52. Decisions on crane repairs (in view of the manufacturer' recommendations, technical inspection report/statement requirements, and actual condition of the crane and the under-crane track) and its operation after repairs shall be made by Crane Maintenance Foreman, who makes the relevant entries in the Crane Maintenance and Repair Logbook (Attachment 3).

53. All repair works shall be performed only upon preparation and approval of the relevant repair technology and Quality Control Plan.

54. For crane inspection or repairs, the crane has to be protected from accidental switch-on (for electric motor-driven cranes, a power supply switch has to be locked up, and for internal combustion engine-driven cranes, the startup key has to be taken out).

55. Materials for repair of lifting crane steel structures have to be selected in accordance with the crane technical documentation provided by its manufacturer. Metal quality of the calculated elements and parts shall be certified and have the manufacturer's quality certificates. For welding of steel structures, the calculated elements shall be welded according to the relevant welding procedure specifications. Calculated elements of steel structures shall be welded by certified welders only holding the relevant qualification certificate. Welding quality documents (repair technology, welding logbook, welding procedure specifications, list of used materials, their certificates, copies of welder certification documents) shall be provided to Crane Maintenance Specialist of the Company.

56. In cases when crane technical documentation has no indication of structural steel material grades and properties, the analysis of materials used by the manufacturer has to be performed and materials selected accordingly with physical and chemical properties similar to those used by the manufacturer.

57. Repair documents, statements of works completed during routine maintenance as well as protocols and other documents shall be kept together with the crane passport, and the data about replaced assemblies or spares shall be recorded in the crane passport.

XI. EMPLOYEE TRAINING

58. Crane Maintenance Foremen, Crane Supervisors, Crane Operators and Riggers shall be subject to additional training, certification or qualification improvement in the following cases:

58.1. If it is reasonably established that an employee violates, fails to observe or is not aware of the requirements of occupational safety and health legislation applicable to the works performed;

58.2. If so instructed by an incident or accident investigation commission, as well as if required by a notified body expert or a controlling authority officer.

59. Crane Maintenance Foremen, Crane Supervisors, Crane Operators and Riggers of the Company shall be subject to periodical trainings at the frequency set forth in Employee Mandatory Training Rules of the Company, whereas Crane Maintenance Foremen, Crane Supervisors, Crane Operators and Riggers of contractors shall be subject to trainings in accordance with the procedure established by a particular contractor.

60. Company employees operating lifting cranes and crane equipment shall be familiarized with the requirements of the present Procedure. Manager of a respective organizational unit of the Company shall be responsible for this familiarization.

61. Employees of contractors operating lifting cranes and crane equipment shall be familiarized with the requirements of the present Procedure. Head of the contracting company shall be responsible for such familiarization.

XII. FINAL PROVISIONS

62. Responsibility for periodic review and updating of this Procedure, if needed, shall lie with Director of Quality, Labour Safety and Environmental Control.

XIII. ATTACHMENTS

Attachment 1. Employee Training Logbook form.

Attachment 2. Lifting Accessories Recording and Inspection Logbook form.

Attachment 3. Crane Maintenance and Repair Logbook form.

Attachment 4. Sample of Crane Marking Plate

Attachment 5. Scope and Frequency of Routine Maintenance of Lifting Cranes

Prepared by
Control and Prevention Group Manager
Egidijus Luomanas

10/13/2020

Public Company ORLEN Lietuva

Attachment 1 to Occupational Safety and Health Procedure BDS-33 'Operation and Servicing of Lifting Cranes'

(Cover Sheet)

PUBLIC COMPANY ORLEN LIETUVA

CRANE INSPECTION LOGBOOK

Type of Crane _____

Reg. No. _____

Lifting Capacity _____

Started _____

Completed _____

_____ **year**

(Sheet 2, etc.)

INSPECTED AND CHECKED	IN ORDER	OUT OF ORDER	NONE
Structural steel			
Boom (jib) condition			
Hook and its suspension parts			
Hook safety latch			
Hook throat			
Wire rope condition			
Wire rope end terminations			
Lifting hook attachment chains and rings			
Crane supports and pads			
Hook overwind cut-out device			
Overwind cut-out device			
Lifting capacity limiter			
Crane tilt indicator			
Signaling and control devices			
Counterweight position indicator			
Wind speed indicator			
Mechanism safety covers			
When performing idle testing of a crane, check the operation of the following elements:			
- crane mechanisms and electric equipment			
- safety equipment and devices			
- brakes			
Crane technical inspection terms:			
- partial technical inspection			
- full technical inspection			

Inspection results (defects identified) _____

Crane inspection performed by Crane Operator (full name, signature) _____

Crane inspection performed
Date _____ Time ___ hrs. ___ min

(Cover Sheet)

PUBLIC COMPANY ORLEN LIETUVA

LIFTING ACCESSORIES RECORDING AND INSPECTION LOGBOOK

Started ________________

Completed ______________

______ **year**

(Sheet 2, etc.)

Inspection date	Description of lifting accessories	Type of lifting accessories	Technical characteristics			Inspection results	Signature of Crane Maintenance Foreman
			Serial No.	Lifting capacity, t	Length, m		

Public Company ORLEN Lietuva

Attachment 3 to Occupational Safety and Health Procedure BDS-33 'Operation and Servicing of Lifting Cranes'

(Cover Sheet)

PUBLIC COMPANY ORLEN LIETUVA

ROUTINE CRANE MAINTENANCE AND REPAIR LOGBOOK

Type of Crane _____

Reg. No. _____

Lifting Capacity _____

Started _____

Completed _____

_____ **year**

(Sheet 2, etc.)

Date	Routine maintenance activities, description of repairs, data on accidents, modifications, technical inspections, etc.	Full name of the employee authorized by the company that completed repairs, modification, technical inspection	Conclusion on fitness for service	Full name and signature of Crane Maintenance Foreman

Sample of Crane Marking Plate

GANTRY CRANE KKS-10

Reg. No. KR-01-00001

Lifting capacity: 10000 kg

Next PTI: 06/10/2022

FTI: 06/10/2024

Place for a sticker indicating the date of technical inspection

Public Company ORLEN Lietuva

Attachment 5 to Occupational Safety and Health Procedure BDS-33 'Operation and Servicing of Lifting Cranes'

Scope and Frequency of Routine Maintenance of Lifting Cranes

Item No.	Scope of maintenance	Frequency
1	Visual inspection of crane mechanical equipment	During PTI and FTI
2	Inspection of operating mechanisms, electrical equipment, safety devices and control equipment	During PTI and FTI
3	Inspection and adjustment of brakes	Every 12 months
4	Preparation of crane hook neck and presentation for NDT laboratory for penetrant testing	During PTI and FTI
5	Crane hook neck penetrant testing Test reports submitted to Crane Maintenance Specialist of the Company	During PTI and FTI
6	Inspection of hook and hook suspension	During PTI and FTI
7	Cleaning, inspection and lubrication of wire ropes and their fixing parts	During PTI and FTI
8	Inspection of pulleys, axles, their fixing parts, and elements of jib crane boom (jib) suspension elements	During PTI and FTI
9	Lubricating of wheel axles	Every 12 months
10	Inspection and adjustment (if required) of distance between beam and travel wheels	During PTI and FTI
11	Inspection of interlocks, limit switches, and sound/light alarms	During PTI and FTI
12	Replenished lubrication of bearings, reducers and replacement of lube points, if required	Every 12 months
13	Checking the lube oil level in reducers, replenishment, changing, as required Checking the lube oil level dipstick and repairing, if required	Every 12 months
14	Visual inspection of crane steel structures and welded (pinned) joints	During PTI and FTI
15	Tightening of fastening and fixing parts and mechanism assemblies	During PTI and FTI
16	Under-crane track leveling. Leveling reports submitted to Crane Maintenance Specialist of the Company	During PTI* and FTI
17	Static and dynamic crane testing with load	During FTI
18	Painting of hook fastening assembly in yellow (the plate to painted from both sides) and inscription of the lifting capacity in black	During FTI
19	Inspection of crane electrical part	During PTI and FTI
20	Measuring the insulation resistance for equipment, auxiliary circuits and el. installations of up to 1000V Measurement reports submitted to Crane Maintenance Specialist of the Company	Every 12 months
21	Measuring resistance of crane grounding system (points) Before the measurement, joints should be checked with hammer for cracks or completely ruptured joints or any other defects. Measurement reports submitted to Crane Maintenance Specialist of the Company	Every 12 months
22	Preparation of Routine Maintenance Report and its submission to Crane Maintenance Specialist of the Company The Report should include indication of the work completed, inspection results, materials replaced, etc.	During PTI and FTI
23	In case repairs for any of the crane parts are required, preparation of the punch list and its presentation to Crane Maintenance Foreman	As required
24	Crane handover to a respective Crane Maintenance Foreman and notified body expert/Company Crane Maintenance Specialist for the relevant technical inspection	During PTI and FTI
25	Update the crane information label	During PTI and FTI

* only for lifting cranes registered with the State Register of Potentially Hazardous Equipment