

COURSE: NR-11/34-API/LOLER/NORSOK – COMPLEMENTARY SAFETY COURSE FOR HOISTING EQUIPMENT OPERATORS - CRANES

SCOPE AND APPLICABILITY

Capacitate participants to perform cargo handling operations with cranes in accordance with Brazilian, International and corporate safety standards. Provide knowledge to properly select and inspect equipment and accessories required for each operation.

REGULATIONS AND STANDARDS

- API RP 2D 7ed;
- PUWER 1998;
- LOLER;
- NORSOK Standard R-003;
- NBR 13541;
- Board Crane Operation Course (COGB);
- NR-11 - Transport, Handling, Storage and Material Handling;
- NR-18 - Conditions and Work Environment in the Construction Industry;
- NR-34 - Annex I - Complementary Course for Crane Equipment operators;
- NR-37 - Health and Safety in Oil Rigs;

COURSE CONTENT:

- a) Introduction, Accidents and its prevention;**
 - Introduction to safe operation of cranes;
 - History, Definitions and characteristics of cranes;
 - Operational Characteristics and operations;
 - Operational procedures;
 - Assembly and installation;
 - Emergency;
- b) Personal Protection Equipment and Collective Protection Equipment;**
 - **Protection and safety devices;**
 - Emergency Stop Device;
 - Preliminary Risk Analysis;
- c) Applicable provisions of the Regulatory Standards;**
 - NR-05 - Internal Commission to prevent accidents;
 - NR-06 - Applicable Personal Protection Equipment;
 - NR-10 - Care with energized elements;
 - NR-11 - Cargo Handling;
 - NR-18 - Construction sites;
 - NR-34 - For Shipbuilding;
 - NR-37 - For Platforms;
 - Applicable NR-12 devices for cranes;
- d) Lifting Equipment:**
 - Types of **cranes in rigs;**
 - Inspection and Maintenance of Equipment and Accessories;
 - **Lifting operations:**
 - Cargo transport;
 - Transport of people;
 - Rigging and Slings;
- e) Special situations and risks, such as:**
 - Cargo movement in the vicinity of energized power lines or devices;
 - Climatic and maritime conditions;
 - Cargo transfer between vessels (offload and backload);
 - Simultaneous operations (SIMOPs);
 - Others;

- Load capacity tables and lifting angles:

- Study of loading;
- Load capacity tables;
- Lifting angles;

f) NR-17 - Ergonomics in the workplace;

g) Practical exercises of operations;

- Common Situations on board the platform;
- Signaling and Communication in operations;

h) Final Assessment.

COURSE DESIGN:

Theory – 12 hours

Practice – 08 hours

TOTAL: 20 hours

PREREQUISITE(S):

Have previously carried out the Cargo Handling/Rigging and Slings training, considering the following conditions:

- If used as an API, cargo handling training must consider valid training based on API RP2D 7ed;
- In case it is used as NR-37, the training of movement of loads and people must be valid according to the company's internal procedure, or in case of omission, 4 years (according to API);

MINIMUM/MAXIMUM NUMBER OF DELEGATES

This course requires a minimum of 2 and a maximum of 40 participants in theoretical classes and a maximum of 8 people for practical demonstrations.

For offshore training, the number of course participants will meet the needs of the vessel.

MAIN SAFETY ISSUES:

- Do not put the hand on the load;
- Do not pass under the load;
- Do not position body parts between suspended loads;
- Know and use standard hand signals as the main means of communication;
- Hold pre-shift meetings;
- Conducting risk analysis;
- Night work;
- Unfavorable weather conditions;
- Communication between team and operator;
- Knowledge of company policies regarding security with cargo handling;

NECESSARY EQUIPMENT:

- Slings;

- Wire ropes;
- Shackles;
- Hoisting equipment;
- Radios;
- Signaling vests;
- Lifting accessories.

PROCEDURES FOR PRACTICAL EXERCISES:

- Reinforce with the students the incident / safety procedures adopted by the company;
- Instructor is allowed to use real-world situations to reinforce Training concepts if area manager and safety officer approve. In this case, the instructor will reinforce safe behavior and positioning predominantly;
- Demonstrate how to plan lifting operations;
- Perform general inspections on hoisting equipment and cargo lashings;
- Inspect and select slings for tasks related to cargo handling;
- Secure positioning;
- Demonstration of how to use communication protocols correctly (Manual and Radio);
- Conduct risk and hazard analysis in accordance with company procedures.

CERTIFICATION:

Certificate of formation signed by the responsible engineer accredited by the Brazilian CREA.

CERTIFICATE VALIDITY PERIOD:

Recommended: 3 years.