

# Crane Assessment Certificate of Competency

## **ASSESSMENT: CRANE OPERATOR – LEVEL B (OR LEVEL 2)**

### **SCOPE AND APPLICABILITY:**

This level is recommended for crane operators that already have experience on crane operations. The recommendation is to allow these crane operators to perform static liftings up to 75% of crane capacity and non-complex dynamic liftings (non-critical liftings). It is strongly not recommendable to let a Level B operator to perform personnel basket transfers.

### **REGULATIONS & STANDARDS:**

- API RP 2D, 7<sup>th</sup> Edition.

### **ASSESSMENT CONTENT:**

1. Discuss the types of cranes used offshore;
2. Identify and describe the standard components on each type of crane;
3. Identify and describe basic crane terminology and their definitions;
4. Identify and describe the boom angle and load radius and how load weight directly affects the lifting capacity of any crane as well as how to use the various tools available (boom angle indicator, load rating charts) to evaluate and perform a safe lift;
5. Identify and describe how basic lifting principles are affected by different variables including boom angle, length, and radius as well as load weight;
6. Discuss the following items: lever principles, lifting principles, types of lifts, static/onboard and dynamic/offboard loading;
7. Know and understand how to read a load rating chart;
8. Know and understand the limitations of the size and type of wire rope used in boom hoist lines, pendants and load hoist line;
9. Know and understand the lifting capacity of the main and auxiliary hook;
10. Know and understand the load and boom hoist drums (speed vs. line pull);
11. Know and understand the construction, mechanics, classes, designation and characteristics of wire rope;
12. Identify and describe the mounting features of the revolving superstructure;
13. Know and understand the types of boom structure;
14. Know and understand the limit devices;
15. Demonstrate how to do pre-start, pre-operational checks and post operation checks;
16. Demonstrate how to complete a pre-use inspection form;
17. Demonstrate how to perform hand signals;
18. Demonstrate how to perform lift procedures, swing crane and control load, depth perception, interpretation of load chart during lifting exercises;
19. Demonstrate how to do a lift plan and perform safely.

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## **COURSE DESIGN:**

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**TOTAL:** 40 hours.

**Assessment:** Necessary time to apply practical evaluations according to the items described above and maneuvers below.

## **PREREQUISITE(S):**

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It is necessary to attend any required local legislation.

Valid API based, Rigging and Slings course;

Valid Safety on Crane Operations Course (it will be provided before the assessment);

Good Health of Eyes (a simple test will be performed by the instructor);

At least 50 registered hours working under Level C or Level 1 previous Certification (registered in log book or signed by his responsible or supervisor);

Level C or Level 1 previous Certification with more than 6 months (a direct certification for level 2/B is possible for experts and very experienced operators without previous certification, however it is strongly not recommended).

## **MINIMUM/MAXIMUM NUMBER OF DELEGATES**

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This course requires a minimum of 1, and a maximum number of 6 trainees.

To offshore trainings, the course number of attendees will comply with the vessels/rig necessity.

## **MAIN SAFETY ISSUES:**

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- Attention with simultaneous activities;
- Special cares about observation of atmospheric and sea conditions;
- Special aware about simulations of maneuvers that are not common, according to the operator's previous experience;
- Observation about safety issues even when dealing with an experiment operator.

## **REQUIRED EQUIPMENT:**

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- Available crane suitable with the required maneuvers and observations according to the level that the candidate is applying for.

## **PROCEDURE FOR PRACTICAL EXERCISES:**

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### **MANEUVERS:**

- Demonstrate equipment checking procedures;
- Demonstrate starting procedure of the equipment;
- Demonstrate how to remove the equipment from the stationary position;
- Demonstrate hook swing control (no load or training load);
- Demonstrate a static lifting from the deck;
- Demonstrate understanding of standard crane communication;
- Demonstrate control of common loads during static maneuvers. Including transportation of: bags, containers, tubes, hoses, tools, etc.;



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- Demonstrate the ability to conduct a lift where the load is in a blind spot (blind lift);
- Monitoring dynamic and critic maneuvers made by a Level 3 crane operator;
- Demonstrate how to act during an emergency on the equipment;
- Demonstrate parking procedure and shutdown of the equipment;
- Demonstrate shift change procedure;
- Demonstrate static liftings up to 75% of crane capacity.

## **CERTIFICATION:**

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Training certificate. This certification level is expected and applicable to all personnel that already have high experience and skills with crane operations.

## **CERTIFICATE VALIDITY PERIOD:**

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4 years.