

## Overview

This standard identifies the competences you need to prepare for rigging activities in a marine environment, in accordance with approved procedures. You will be required to prepare the rigging equipment to the required specification and health and safety regulations (LOLER). You will be expected to select the appropriate equipment and to check that it is within current certification requirements and is in a safe and usable condition. You will be expected to prepare the equipment in readiness for the rigging activities and this will include such items as determining the layouts for docking and mooring, the sizes, SWL (safe working load) or WLL (working load limit) and lengths of fibre and wire ropes, the position of pad eyes, lugs and fairlead arrangements. In addition, you will be expected to prepare wire and fibre rope and to check the operation and condition of ancillary machinery such as winches, cranes, and rigging equipment.

Your responsibilities will require you to comply with your organisation's policies and procedures for the preparation of the rigging equipment. You will be required to report any problems with the preparation activities that you cannot resolve, or which are outside your defined authority, to the relevant people. You will be expected to work to instructions, either alone or in conjunction with others, taking personal responsibility for your own actions and for the accuracy and safety of the work that you undertake.

Your underpinning knowledge will be sufficient to provide a sound basis for your work and will provide an informed approach to the preparation of rigging equipment. You will have an understanding of the preparation process and its application and will know about the preparation requirements, equipment and materials to be used, in sufficient depth to provide a sound basis for carrying out the activities to the required standards.

You will understand the safety precautions required when carrying out the preparation operations. You will be required to demonstrate safe working practices throughout and will understand the responsibility you owe to yourself and others in the workplace.

## Performance criteria

### *You must be able to:*

1. work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. obtain all the required rigging equipment and ensure that it is in safe and usable condition
3. obtain appropriate information from a rigging/mooring/docking plan
4. carry out the necessary preparations to the equipment in line with work requirements
5. make sure that required safety arrangements are in place to protect other workers from activities likely to disrupt normal working
6. carry out checks for condition and defects
7. report completion of preparations in line with organisational procedures
8. complete relevant paperwork, in accordance with organisational requirements
9. deal promptly and effectively with problems within your control and report those that cannot be solved

## Knowledge and understanding

### *You need to know and understand:*

1. the specific safety precautions to be taken when preparing equipment for the rigging activity, and the need for ensuring the load security (such as general workshop and site safety, appropriate personal protective equipment (PPE), protecting other workers during the lifting operations; accident procedure; statutory regulations, risk assessment procedures and COSHH regulations)
2. the hazards associated with preparing equipment for rigging and how they can be minimised
3. an understanding of the Approved Code of Practice (ACOP) for preparing equipment for the rigging activity, and Lifting Operation and Lifting Equipment Regulations (LOLER) also BS 7121
4. the requirements for the marking of rigging equipment and the specific method used in the organisation in which you are working
5. the range of equipment that is to be used during the rigging process (such as cranes, windlass, capstans, hydraulic jacks, chain blocks and low loaders)
6. the lifting equipment accessories that are to be used (such as slings, chains, wire ropes, eye bolts)
7. how to obtain, from the register of lifting/rigging equipment details, the status of a particular piece of equipment
8. isolation procedures and emergency stops for ancillary machinery (such as winches and cranes)
9. checks on the operation and condition of ancillary machinery and items that you should look for that could render the machinery unsafe to use
10. the range of rigging/berthing/mooring arrangements
11. how to obtain the correct information from rigging/mooring/docking plans (including wire and fibre rope sizes, lengths and SWL/WLL)
12. preparation of fibre and wire ropes for the rigging activity
13. the range of equipment used in the various rigging activities and factors to be taken into account
14. the purpose and use of the respective pieces of equipment and the limitations (particularly with regard to SWL/WLL)
15. checks to be carried out on rigging/lifting equipment and possible defects
16. procedures for reporting defects in machinery, rigging equipment and fibre or wire ropes and actions to be taken

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17. how rigging equipment should be stored and handled
18. why tool/equipment control is critical and what to do if a tool or piece of equipment is unaccounted for on completion of the activities
19. the problems that can occur with rigging activities and how these can be avoided
20. the completion of equipment registers and records of rigging arrangements
21. the extent of your own responsibility and whom you should report to if you have problems that you cannot resolve

## Scope/range related to performance criteria

1.

Ensure that the equipment to be used is suitable for the equipment being lifted, and is in a safe and usable condition, by checking all of the following:

- 1.1 all rigging equipment, including wire/fibre ropes and chains, can be identified on the register and have relevant test certificates, inspection reports and maintenance records
- 1.2 where applicable, equipment has the correct colour coding
- 1.3 all equipment and ropes are free from obvious defects
- 1.4 the identification number and SWL/WLL, are clearly marked on the equipment selected
- 1.5 the equipment selected is suitable for the environment of operation

2.

Prepare for three of the following rigging activities:

- 2.1 mooring and berthing operations
- 2.2 rigging davits
- 2.3 preparing docks and slips for vessel operations
- 2.4 rigging accommodation ladders/gangways
- 2.5 setting up access structures
- 2.6 'replenishment at sea' rigging arrangements
- 2.7 rigging cranes
- 2.8 maintenance of rigging equipment
- 2.9 standing rigging
- 2.10 maintenance of anchors and chains
- 2.11 rigging derricks

3.

Obtain information from a rigging/mooring/docking plan, to include four of the following:

- 3.1 dock/slip centre line
- 3.2 lifeboat davit falls, type of wire, length, size, SWL/WLL and lead arrangements
- 3.3 type and position of mooring lines and number of parts
- 3.4 length, size and SWL/WLL of topping lift wires
- 3.5 positions of pad eyes/lugs for securing shackles/blocks
- 3.6 length, size and SWL/WLL of runners
- 3.7 length, size and SWL/WLL of guy wires or ropes
- 3.8 number and SWL/WLL of shackles required
- 3.9 length, size and SWL/WLL of guy pennants
- 3.10 number, type and SWL/WLL of blocks required
- 3.11 length, size and SWL/WLL of standing rigging
- 3.12 lead arrangements
- 3.13 length, size and SWL/WLL of accommodation ladder falls

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- 3.14 length, size and SWL/WLL of crane wires
- 3.15 length, size and SWL/WLL of wire/rope for multi-sheave block arrangements
- 3.16 other specific information

4.

Prepare ropes for rigging activities, to include both of the following:

- 4.1 fibre ropes
- 4.2 wire ropes

5.

Prepare the ropes for rigging activities, by carrying out two of the following operations:

- 5.1 cutting wire rope to length
- 5.2 cutting fibre rope to length
- 5.3 applying whippings and seizings to wire rope
- 5.4 applying whippings and seizings to fibre rope

6.

Check the correct operation/condition of three of the following items of machinery/equipment, prior to the rigging activity:

- 6.1 cranes
- 6.2 powered lifting equipment
- 6.3 winches
- 6.4 hand operated lifting equipment
- 6.5 windlass
- 6.6 chain blocks
- 6.7 capstans
- 6.8 jacks, skates and trolleys
- 6.9 hydraulic jacks
- 6.10 low loaders

7.

Carry out checks for condition and defects on five of the following items, prior to the rigging activity:

- 7.1 clamps
- 7.2 chains
- 7.3 pull lifts
- 7.4 slings
- 7.5 rings/swivels
- 7.6 shackles/eye bolts
- 7.7 hooks
- 7.8 blocks
- 7.9 fibre ropes
- 7.10 bottle screws
- 7.11 wire ropes
- 7.12 hand tools
- 7.13 pad eyes

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8.

Identify and use suitable protection materials for the equipment and load during the lifting operation, to include two of the following:

- 8.1 appropriate packaging
- 8.2 material to protect for sharp edges/corners
- 8.3 sleeves
- 8.4 guide ropes

9.

Complete the relevant documentation for the recording of the rigging preparation activity, to include one of the following:

- 9.1 register of lifting equipment
- 9.2 record of arrangements for derricks, davits
- 9.3 colour coding arrangements
- 9.4 inspection records/defect reports

## Behaviours

You will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as:

- strong work ethic
- positive attitude
- team player
- dependability
- responsibility
- honesty
- integrity
- motivation
- commitment

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