Overview

This standard identifies the competences you need to assist in carrying out mooring and berthing operations, in accordance with approved procedures. You will be required to handle mooring wires, ropes and chains and to operate capstans, winches and windlasses, correctly and safely. In addition, you will be able to position and secure gangways, walkways, platforms, pontoons. Prior to carrying out mooring and berthing operations, you must ensure that mooring wire, ropes and chains are in a suitable condition and are laid out to minimise any risk of injury to persons involved in the operations, that there is power to windlasses, winches and capstans and that they are operating correctly. Any developing or actual unsafe situations must be communicated immediately to the person who has overall responsibility for the berthing and mooring operation. During mooring and berthing operations, you will be expected to comply with organisational procedures, which will include the proper interpretation or verbal orders, some of which will be via radio communication, and the use and interpretation of hand signals.

This standard applies to floating structures and vessels, with or without their own power, assisted by tugs or being positioned using ancillary machinery.

Your responsibilities will require you to comply with organisational policy and procedures for the mooring and berthing activities undertaken and to report any problems with these activities that you cannot personally resolve, or are outside your permitted authority, to the relevant people. You will be expected to work to instructions, alone or in conjunction with others, taking full responsibility for your own actions and for the safety of yourself and others around you.

Your underpinning knowledge will be sufficient to provide a good understanding of mooring and berthing operations and will provide an informed approach to applying the laid-down procedures. You will have an understanding of the handling characteristics of hawsers, wire ropes and chains and the correct use of ancillary machinery used in the berthing and mooring operations. You will understand signalling and communication procedures, in sufficient depth to provide a sound basis for carrying out the mooring and berthing activity safely and correctly. You will also understand the storage, maintenance and inspection requirements of the mooring equipment.
You will understand the safety precautions required and risks involved in the mooring and berthing operations and the ways in which these can be minimised. You will be required to demonstrate safe working practices throughout and will understand the responsibility you owe to yourself and others, both ashore and afloat.
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. follow the relevant operational procedures when carrying out your activities
3. assist in mooring and berthing operations within the limits of your personal authority
4. prepare equipment/machinery correctly for mooring/berthing operations
5. establish within time constraints ship to shore link
6. use signals and other communications effectively
7. assist in positioning and securing the vessel with regard for prevailing conditions
Knowledge and understanding

You need to know and understand:

1. the specific safety precautions to be taken during mooring and berthing operations (to include personal protective equipment (PPE), safety of others, accident procedures, statutory regulations and risk assessment procedures)
2. the hazards associated with carrying out mooring and berthing operations and how they can be minimised
3. the signalling techniques used during the mooring and berthing operations
4. the various verbal commands and communication methods that are used (including correct radio communication procedures)
5. the correct operation of winches, windlasses and capstans (particularly with regard to emergency stops)
6. the correct methods of laying out hawsers, wire ropes and chains, in preparation for mooring and berthing operations
7. how to establish ship-/structure-to-shore links
8. the characteristics of hawsers, of different materials and wire ropes when being heaved, or slackened on winch, windlass and capstan drums
9. the action of the various hawsers and wires when subject to breaking strains
10. the importance of fairleads when heaving or slackening hawsers and wire ropes
11. the range of equipment and machinery necessary for mooring and berthing operations
12. the effect of environmental conditions (including tides and wind) on mooring and berthing operations
13. the purpose of headlines and springs, when carrying out mooring and berthing operations
14. the techniques for applying stoppers to hawsers, wire ropes and chains
15. how to secure hawsers, wire ropes and chains to bollards, mooring posts
16. how to check the condition of hawsers, wire ropes, chains and associated equipment
17. the correct storage of hawsers, wire rope and chains
18. the problems that can occur with the mooring and berthing operations, and how these can be overcome
19. the importance of ensuring that the completed mooring is safe and secure
20. the importance of ensuring that guard rails, chains and stanchions are correctly secured
21. what to do if you find flaws or damage in the hawsers, wire ropes or chains
22. the extent of your own responsibility and whom you should report to if you have problems that you cannot resolve
1. Ensure that all of the following have been carried out, prior to mooring and berthing operations:
   1. the power supply to winches, capstans and windlasses is switched on and they are operating correctly
   2. hawsers, wire ropes and chains, as appropriate, are laid out in such a way as to minimise risk during the operations
   3. communication systems are adequate and operational
   4. rope and wire stoppers are in place
   5. the nature of the mooring/berthing operation is understood
   6. all hawsers, wire ropes and chains are suitable for the mooring/berthing operation and are in good condition

2. Establish a ship-to-shore link, using two of the following:
   1. heaving line
   2. rocket line
   3. mooring boat
   4. tug

3. Operate two of the following during the mooring/berthing operations:
   1. electric windlass
   2. electric winch
   3. hydraulic windlass
   4. hydraulic winch
   5. electric capstan
   6. hydraulic capstan

4. Assist with the positioning of the vessel, craft or structure, ensuring fairleads and using three of the following:
   1. hawsers
   2. breast lines
   3. wire ropes
   4. letting go anchor
   5. chains
   6. weighing anchor
   7. head ropes
   8. headlines
   9. stern lines
   10. springs
5. Secure the vessel, craft or structure in place, ensuring adequate moorings to suit the conditions, to include carrying out three of the following operations:
   1. using rope stoppers
   2. turning up hawsers and wire ropes on bollards and mooring posts and making secure
   3. using chain stoppers
   4. using patent stoppers
   5. setting up and adjusting tension winches

6. During berthing and mooring operations, position and secure two of the following:
   1. gangways
   2. platforms
   3. walkways
   4. pontoons
   5. landing stages
   6. fixed fenders

7. Let go the vessel, craft or structure from the moorings, ensuring all of the following:
   1. head and stern lines, breast lines and springs are singled up and let go in the correct sequence
   2. relevant people are informed when letting go moorings that could foul propellers and thrusters
   3. all lines are retrieved with the maximum speed, consistent with safety
   4. where appropriate, tugs are secured prior to letting go
   5. retrieved hawsers and wire ropes are safely coiled to avoid trip hazards
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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### Assisting in mooring and berthing operations

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