

## Overview

This standard covers the competence required to handle loads using various types of lifting equipment. This will include moving loads using fork lift trucks and other mobile lifting equipment; moving containers using shore based lifting equipment and moving loads by crane. The standard includes planning and implementing a lifting plan to handle large awkwardly shaped loads and very heavy loads which require specialised handling. It also includes transferring loads using ship's gear, such as a crane and handling dry bulk cargo using automated equipment.

## Target Group

This standard applies to port workers who are required to handle loads using lifting equipment

There are 6 elements in this standard:

- Move loads using mobile lifting equipment (Performance Criteria 1-13)
- Move containers using shore based lifting equipment (Performance Criteria 14-31)
- Lift and position loads by crane (Performance Criteria 32-40)
- Transfer loads using ships gear (Performance Criteria 41-48)
- Handle dry bulk cargo using automated equipment (Performance Criteria 49-56)
- Trim and clean out dry bulk cargo (Performance Criteria 57-67)

## Move loads using lifting and handling equipment

### Performance criteria

#### *You must be able to:*

1. confirm that loads are suitable, safe and stable for handling by mobile lifting equipment before beginning the lift
2. check for and remove any obstructions on the route of the lift before beginning operations
3. select lifting equipment that is suitable for the intended lift and is within certification
4. select attachments suitable for the load being handled, and ensure that these are adjusted and fit for use
5. conduct a pre-use check to establish that all functions are working within approved operating parameters before beginning operations, addressing any queries or faults according to organisation procedure
6. lift loads evenly and according to organisational procedures for safe lifting
7. locate lifting attachments (such as fork lift forks) into the designated lifting points
8. handle loads to minimise the risk of damaging the load
9. manoeuvre mobile lifting equipment safely, taking into account the organisation procedures for equipment operation, the capabilities and limitations of the mobile lifting equipment and attachment(s), and the activities and whereabouts of individuals within the vicinity of the lifting operation
10. monitor attachments during lifting operations to confirm that they are operating within organisationally determined tolerances
11. monitor the activities and whereabouts of individuals and vehicles within the vicinity of the mobile lifting operation
12. close-down equipment upon completion of the moving operations, in line with the manufacturers' instructions and operational procedure
13. remove and store attachments upon completion of lifting operations in line with organisational procedures and within own limits of responsibility
14. identify the containers to be moved and their destination
15. use lifting equipment, and attachments that are suitable for the container, taking into account the type of operation, the dimensions, weight and location of the container, and the planned work area
16. conduct a pre-use check to establish that all functions are working within approved operating parameters before beginning operations, addressing any queries or faults according to organisation procedure
17. check for and remove any obstructions on the route of the lift before beginning operations
18. establish contact and agree the protocol for the handling operations with all those involved, using appropriate methods before beginning operations
19. communicate by hand and radio, using agreed protocol
20. operate the shore-based equipment according to manufacturer's instructions and organisational procedure
21. manoeuvre containers efficiently to required destinations following authorised routes and avoiding contact with persons, plant or equipment
22. ensure that the required number of lock devices are deployed, when loading to road or rail
23. lift loads evenly and according to organisational procedures for safe lifting
24. locate lifting attachments (such as fork lift forks) into the designated lifting points
25. handle loads safely, securely and evenly to minimise the risk of both injury to persons and damaging the load
26. monitor the activities and whereabouts of individuals and vehicles within the vicinity of the lifting

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operation 27. ensure that the driver and other personnel in the vicinity are in the designated place of safety before loading to road trailers 28. close-down equipment upon completion of the moving operations, in line with the manufacturers' instructions and operational procedure 29. store equipment according to organisational procedure 30. address and report immediately any faults or difficulties with the moving operations or the materials used 31. leave all equipment clean and secure 32. assess the characteristics of the load to be lifted, identifying where special attachments are required, and ensuring that these are fitted before beginning the lift 33. use the type of crane suitable for the lifting task, confirming that it has the capacity outreach, for the lifting operation required in advance of beginning the lift 34. position and set up the crane 35. conduct a pre-use check to establish that all functions are working within approved operating parameters before beginning operations, addressing any queries or faults according to organisation procedure 36. establish contact and agree the protocol for the lift with all others involved in the operation using appropriate methods and prior to beginning the lifting operation 37. operate the crane, taking due care to avoid contact between the crane or its load and persons, other plant, equipment, vessels and port infrastructure 38. follow the agreed lifting plan 39. close-down equipment upon completion of lifting operations, in line with manufacturer's instructions and operational procedure 40. address and report immediately fault or difficulties with the lifting operations or the materials used 41. confirm with the responsible person that the ship's gear provided is suitable for the lifting operation required, taking into account the capabilities of the gear, the characteristics and location of the load, its destination and the planned work area 42. confirm with the responsible person that documentation, including test certificates, relating to the equipment is in order, referring any queries before beginning handling operations 43. familiarise yourself with the controls 44. conduct a pre-use check to establish that all functions are working within approved operating parameters before beginning operations, addressing any queries or faults according to organisation procedure 45. establish contact with all others involved prior to beginning the operation and agree the protocol for transferring the load 46. make all communications, by hand and radio, in line with the agreed protocol and the organisation communication procedures 47. operate ships' gear such that the ship's stability is maintained and neither the gear nor load come into contact with persons, plant, equipment or vessel structure 48. monitor all activities and the whereabouts of individuals and other vessels within the vicinity of the operations 49. establish the characteristics of the cargo to be transferred and confirm that the cargo is suited for handling by the selected automated equipment 50. conduct a pre-use check to establish that all functions are working within approved operating parameters before beginning operations, addressing any queries or faults according to organisation procedure 51. take immediate and appropriate actions to address any difficulties relating to the equipment, cargo or working

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environment 52. operate the automated equipment in line with organisation procedures 53. load/unload the cargo in accordance with instructions provided 54. establish and maintain contact with all those involved and affected by the operation 55. upon completion, ensure all equipment is stored securely and in good condition in line with organisation procedures 56. report any defects or problems with equipment 57. confirm that the self-drive plant to be operated is suitable for the task, taking into account the type of operation, the nature of the cargo and the nature and condition of the vessel's hold 58. conduct a pre-use check to establish that all functions are working within approved operating parameters before beginning operations, addressing any queries or faults according to organisation procedure before entering the hold 59. identify any other equipment required and confirm that it is available before commencing operations 60. establish with the responsible person that it is safe to enter the hold prior to commencing operations 61. access and egress the hold according to own organisation's procedures position and prepare plant ready to be lifted into the hold 62. trim dry bulk cargo that has been loaded already, ensuring that it is levelled in accordance with standard operating procedures 63. support the unloading of dry bulk cargo using appropriate methods agreed before beginning the operation 64. establish and maintain clear precise contact with all others involved in the operation 65. report any difficulties identified to the relevant person 66. monitor all activities and the whereabouts of pedestrians and other plant vehicles within the vicinity of your operation, taking immediate and appropriate actions to address dangerous situations 67. store all plant and equipment according to organisation procedure and in good condition upon completion of the work

## Move loads using lifting and handling equipment

### Knowledge and understanding

*You need to know and understand:*

1. the legal responsibilities for maintaining own and others' health and safety in your workplace 2. the requirements placed upon the individual and the organisation by current legislation, relevant to handling loads using lifting equipment 3. current industry guidance relevant to lifting equipment operations 4. own organisation's policies, procedures and working practices relevant to operations using lifting equipment 5. the operating procedures, capabilities (including manoeuvring characteristics) and limitations of the types of lifting equipment within own area of responsibility 6. the pre-start maintenance requirements, including the procedure for checking lubricants and other fluids of lifting equipment within own area of responsibility 7. why it is important to report any faults and defects prior to commencing operations 8. the implications of operating equipment that is unsafe or that has been serviced poorly 9. the types of load that may be lifted by each type of lifting equipment within own area of responsibility 10. the factors that can affect the stability and security of loads when they are being transferred, and how these can be affected by environmental conditions 11. the methods of slinging and un-slinging loads, including angles of operations and what constitutes a safe working load 12. the capabilities, including capacity and strength of the principal types of slinging and lashing materials, and the implications of using defective or faulty materials 13. how to interpret organisation coding systems relating to lifting equipment, and how to interpret the information found on load labels and documentation 14. the signalling procedures and techniques used in the organisation 15. the speed limits specified for equipment operating within the port environment, the importance of operating within these limits, and of maximising the safety of pedestrians and other drivers 16. the limits of own responsibility and to whom to report if these are exceeded 17. the requirements placed upon the individual and the organisation by current legislation, relevant to trimming and cleaning out cargo and the importance of ensuring that precautions are taken 18. current industry guidance relevant to trimming and cleaning operations 19. own organisation's policies, procedures and working practices relevant to trimming and cleaning operations 20. the operating procedures, capabilities (including manoeuvring characteristics) and limitations of the types of trimming and cleaning equipment within own area of responsibility 21. the pre-start maintenance requirements, within own area of responsibility 22. how to ensure that organisational pre-entry checks, including atmospheric checks, have taken place prior to entry and what constitutes a 'safe' entry to the working environment 23. the principal characteristics of the main types of cargo, and the associated hazards 24. how to monitor all activities and the whereabouts of persons, plant, equipment, vessels and infrastructure within the vicinity of the operations, and the action required if unplanned contact between the

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lifting equipment or cargo is at risk of occurring

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