

## Undertake cargo handling operations

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### Overview

This standard covers the competence required to support cargo handling operations. Ports may handle many different types of cargo including dry bulks, liquid bulks, cargo transport units and roll-on/roll-off.

This standard includes checking and marking cargo, securing cargo and transferring loads through slinging and signalling. It is also about the loading and unloading of cargo transport units, receiving, storing and despatching cargo and handling loads manually. It is also about providing support to roll-on/roll-off operations including signalling to drivers, using associated equipment, such as trestles and jacks and operating air suspension devices.

This standard also includes operating equipment to discharge and/or load bulk liquid cargo. This includes preparing for the arrival of a tanker or vessel, connecting the pipelines and ensuring that the cargo flows unhindered and disconnecting the pipelines and cleaning the equipment that has been used.

### Target Group

This standard applies to port workers who are required to support cargo handling operations.

There are 8 elements in this standard:

- Check, mark and record cargo (Performance Criteria 1-10)
- Secure cargo ((Performance Criteria 11-18)
- Transfer loads through slinging and signalling (Performance Criteria 19-32)
- Load and unload cargo transport units (Performance Criteria 33-44)
- Receive, store and dispatch cargo (Performance Criteria 45-58)
- Handle loads manually (Performance Criteria 59-65)

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- Support cargo handling operations associated with Ro/Ro vessels (Performance Criteria 66-75)
- Operate equipment for moving bulk liquids (Performance Criteria (Performance Criteria 76-93)

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**Performance criteria***You must be able to:***Check, mark and record cargo**

1. identify the type, condition and quantity of cargo 2. confirm that relevant documentation is complete and accurate, and is in line with the labelling of the cargo 3. identify and mark cargo legibly, using marking materials and methods suited to the cargo type, condition and quantity 4. report and record any observed or reported missing items or damage to cargo and deal with any damage or problems with the cargo and any discrepancies with the documentation, reporting any difficulties which are outside your level of responsibility to the responsible person 5. identify any cargo in a hazardous condition, and implement relevant health and safety procedures, recording the incident in accordance with standard operating procedures 6. obtain all relevant information regarding the movement of cargo, 7. maintain confidentiality and keep information secure 8. maintain accurate, up to date and legible records of all information relevant to the operation being undertaken 9. fulfil customers' requirements covering the maintenance or records regarding the movement and storage of their cargo 10. address any difficulties in recording and retrieving information 11. ensure that cargo is stable prior to it being secured 12. identify, assess and use lashing/securing points of adequate strength for the forces to be applied when securing the cargo 13. secure cargo using the appropriate securing devices and equipment, with all securing devices positioned and tensioned taking into account its type, weight and dimensions, customer requirements and the prevailing weather conditions 14. check and brace cargo 15. see where customer requirements differ from own assessment of the lashing/securing points required, and secure cargo according to instructions from own supervisor 16. secure cargo using methods within own level of responsibility 17. report any difficulties in securing cargo to the responsible person 18. monitor the activities and whereabouts of individuals within the vicinity of the securing operations, and take immediate and appropriate actions to address dangerous situations 19. identify the load to be slung, including its type, weight centre of gravity and dimensions 20. confirm that the lifting gear, method and materials selected for the lifts are suitable, fit for purpose and free from defect 21. report any defective gear to the responsible person 22. confirm that the load is stable prior to it being slung 23. follow an agreed lifting plan that has been produced by a competent person according to organisation procedures 24. attach lifting gear, and confirm that the support, balance and securing of the load complies with the requirements of the lifting plan, and that the gear will not damage the load during lifting 25. report any difficulties in slinging loads to the responsible person 26. confirm that lifting equipment and attachments are safe for use before beginning the lifting operation 27. position yourself so that you have a safe and unobstructed view of the lifting

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equipment operator at all times, when using hand signals 28. determine the conditions under which a second signaller would be required to ensure unobstructed hand signal communication during a lift 29. ensure that all of your communications, by hand and radio, comply with protocol and agreed procedures 30. interpret the signals and messages from the lifting equipment operator and act upon these immediately 31. confirm the safe conclusion of a lifting operation to the lifting equipment operator 32. monitor the activities and whereabouts of individuals and vehicles within the vicinity of the lifting operation 33. respond, to requests for the removal or inspection of cargo in line with organisation procedures 34. identify cargo units to be unloaded, confirming that door locks and seals are intact, and ensuring that the units are positioned in areas designated for de-vanning prior to commencing de-vanning operations 35. ensure that refrigerated cargo unit power supplies are disconnected according to procedure prior to the unit being moved 36. implement your organisation's procedures for safe opening of and access into cargo units 37. inspect the position of the cargo, recording any damage 38. unload cargo according to agreed procedures, in line with organisation's requirements, with full cooperation given to the authority requesting the work 39. check with the relevant authority whether emergency equipment/ services are required, before segregating cargo 40. ensure that emergency equipment/services required for a segregation operation are in place before transferring the required cargo to an appropriate inspection site 41. reload and secure cargo according to organisational procedures, taking into account the cargo type, limitations of the cargo unit, and safe weight distribution principles 42. use loading and access equipment which is compatible with the cargo 43. seal loaded cargo units in accordance with legislative requirements 44. report any difficulties, and faults in equipment and materials 45. collate all required documentation for cargo being received / stored / despatched 46. confirm that the documentation is complete and matches the quantity and condition, referring any discrepancies to the responsible person 47. ensure that there is adequate and appropriate storage area and capacity available for cargo being delivered / despatched, and that loading arrangements are appropriate and available 48. ensure cargo is located and positioned safely in line with organisation procedures before loading or unloading begins 49. store cargo in areas suited to the type, characteristics and quantity of cargo to be stored 50. meet agreed customer requirements unless directed otherwise by a responsible person 51. ensure cargo is stored such that it can be accessed readily and is not obstructing other normal operations 52. ensure handling equipment used in loading / unloading is operated safely in accordance with standard operating procedures 53. check consignments received against order and delivery documentation to confirm that the quality, quantity and condition of the cargo is acceptable, identifying and referring any discrepancies 54. maintain records relating to the receipt / storage / despatch of cargo, ensuring that these are up to date and

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complete 55. monitor the condition of stored cargo regularly, recording and reporting any damage or deterioration in its condition 56. ensure that racking or shelving is in good condition and is suited for the cargo being stored 57. report any problems with racking or shelving to the responsible person 58. ensure working areas are kept clean, tidy and free from obstructions and hazards 59. confirm that loads are suitable and safe for lifting manually, including assessing their weight, before beginning any lift 60. identify the content of loads from the labelling and international symbols provided 61. ensure that where loads contain hazardous goods, that the relevant safety precautions are identified and followed 62. clear any obstructions on the route prior to undertaking a lift 63. use lifting and handling techniques in line with organisational procedures at all times when handling loads manually 64. use handling equipment in line with manufacturer's instructions and organisational procedures, taking due care to avoid damaging the load at all times 65. report any damage and difficulties in handling loads 66. guide drivers of vehicles manoeuvring in operational areas using pre-agreed signalling methods 67. monitor areas when guiding vehicle drivers, using clear signalling to communicate with all relevant personnel 68. keep working areas clear of obstructions 69. implement controls to prevent the movement of the vehicle and trailer before unhitching trailers 70. operate trailer legs in accordance with standard procedures 71. operate air suspension trailers 72. use associated equipment according to manufacturer's instructions, procedures, and the operation and vehicle requirements 73. connect, and disconnect, units with plug-in requirements 74. maintain own health and safety at all times 75. monitor all activities and the whereabouts of individuals and vehicles within the vicinity of your operations, and take immediate and appropriate actions to address dangerous situations 76. establish the nature of the cargo to be handled 77. identify and assess the potential hazards 78. prepare the quay area according to own organisation's procedures ensuring that all obstructions and hazards are removed, relevant safety systems are available and operating properly and that cordons and warning signs are in place as specified in the safe system of work 79. ensure that all appropriate precautions are in place, including identifying the safety and emergency shutdown procedures 80. identify the equipment required and confirm that it is available and operating according to organisation standards before handling the cargo 81. confirm the destination of the cargo and that there is adequate storage capacity available for the cargo expected, before beginning handling operations 82. establish and maintain clear contact with all others involved in the operation, agreeing the protocol for transferring the cargo prior to beginning handling operations 83. connect pipelines, assembling flanges and gaskets, and lining up valves 84. confirm that all connections are leak-free by conducting pressure tests before moving the cargo 85. monitor the pipelines for leaks throughout the operation 86. identify and address any difficulties in accordance with operational procedures 87. confirm that upon

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completion of the transfer, it is safe to disconnect pipelines by checking back pressures 88. ensure that pipelines are cleaned and disconnected 89. store disconnected pipelines, hoses and gantries in good condition and in accordance with operational procedures 90. clean any residues and spillages within own level of responsibility 91. notify a competent person of any residue or spillage outside of your own level of responsibility to clean 92. ensure quay areas are left clean, tidy and free of obstructions 93. maintain up to date records of cargo transferred

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### Knowledge and understanding

*You need to know and understand:*

1. the legal responsibilities for maintaining own and others' health and safety in the workplace
2. the requirements placed upon the individual and the organisation by current legislation, relevant to cargo handling in own area of operations
3. current industry guidance relevant to cargo handling in own area of operations
4. own organisation's policies, procedures and working practices relevant to cargo handling
5. the operating procedures, capabilities (including manoeuvring characteristics) and limitations of the types of equipment within own area of operations
6. why it is important to report any faults defects prior to commencing operations
7. the implications of operating equipment that is unsafe or that has been serviced poorly
8. the importance of checking and marking cargo, and the implications of doing this incorrectly
9. the principal characteristics of the main types of cargo, and the associated hazards
10. the classes of dangerous goods and relevant markings under current regulations/code(s)
11. the procedures for dealing with incomplete or damaged cargo
12. how to interpret coding systems relating to cargo, and how to interpret information found on cargo labels and documentation, as applicable to own organisation
13. the factors that can affect the stability and security of cargo when it is in transit, including the effects of environmental conditions
14. the methods for protecting, securing and un-securing cargo, and the appropriate types of materials and securing equipment
15. the principal methods and systems used to lash different types of cargo, and how to assess and select appropriate lashing points for different types of cargo
16. how to tension lash materials, and the implications of not doing this
17. the appropriate use of knots when securing cargo to ensure safe and adequate tension
18. the principles of chocking and shoring, and the use of relevant tools and equipment in line with manufacturer's instructions and organisational procedures
19. the different types of hazards associated with securing cargo
20. own levels of responsibility and capability, and the persons to refer if these are exceeded
21. methods for slinging and unslinging loads, including an awareness of angles of operations and what constitutes a safe working load the capabilities, including capacity and strength, of the principal types of slinging and lashing materials, and the implications of using defective or faulty materials
22. the position and preparation of plant to be made ready to be lifted into the hold
23. signalling procedures and techniques
24. the risks associated with the unplanned entry of individuals and vehicles into the area of a lifting operation
25. the actions to take to address unplanned entry into a lifting operation area
26. how to interpret organisation's coding systems relating to lifting equipment, and how to interpret the information found on relevant labels and documentation
27. the hazards associated with fumigants and other noxious gases, and the importance of taking the relevant precautions to ensure adequate ventilation before entering storage areas
28. how to

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handle power supplies safely 29. the organisation's policies and procedures relating to loading and unloading cargo transport units relevant to own area of operations 30. the principal methods for storing cargo, and the factors to be taken into account when selecting the correct methods, including safe heights, stability requirements and any need for segregation 31. the implications regarding receiving incomplete or damaged cargo 32. the organisation's loading priorities and operating schedules 33. how to apply the organisation's systems for recording cargo received and despatched 34. the organisation's procedures for checking cargo 35. safe manual handling and lifting techniques, the kinetics involved, and the importance of using these techniques to control the risk of injury and/or damage to the item being lifted 36. the organisation's policies and procedures relating to manual handling loads relevant to own area of operations 37. the physical layout of the port area, relevant to own area of operations 38. the principal types of cargo handling equipment used on Ro/Ro vessels and their specific characteristics 39. the operational requirements of haulage vehicles, and the characteristics of trailers and their cargo when being moved 40. the principal types of hazards that can occur and the precautions appropriate to addressing these hazards 41. how changes in environmental conditions (such as weather and tide) can affect loading and discharge operations from Ro/Ro vessels 42. the characteristics of vessels, ramps, vehicles and plant used for cargo handling operations within Ro/Ro vessels 43. the principal types of bulk liquid handling equipment, their operating capabilities and specific characteristics 44. the implications of back pressure and its significance in relation to pipeline systems 45. the procedures for flushing and pigging lines 46. the principal characteristics of the main types of liquid bulk cargo, including their nature and weight and whether they are hazardous or non-hazardous 47. organisational policies and procedures relevant to liquid bulk operations organisational procedures relating to meeting legislative requirements regarding operating equipment for moving bulk liquids, and are aware of the relevant sections of this legislation 48. the physical layout of the port area, relevant to your area of operations 49. the organisation's high-level alarm systems and their impact on operations 50. the organisation's emergency shutdown arrangements, and own role within these 51. how to assess the need for and obtain ancillary lighting where required to ensure safe working 52. how to operate vehicle lifts safely, using clear signalling to communicate with all relevant personnel



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