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| Overview | This standard covers the competence required when planning, and then carrying out the loading and discharge of bulk liquid cargo vessels.  **Target Group**  This standard applies to individuals at the operational level with responsibility for planning and carrying out the loading and discharging of bulk liquid cargo vessels, in inland or coastal waters. |

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| **Performance criteria**  You must be able to: | 1. establish the exact nature of the cargo to be handled, identify and assess all potential hazards, and determine the correct safety and emergency shutdown procedures 2. determine the communication protocols with the receiver/supplier of the cargo 3. plan the loading/discharging operation, taking into account the characteristics of the vessel, berth and load, including procedures to avoid the overfilling of any tanks, and the need to protect the local environment from potential pollution 4. identify any potential areas of uncertainty, and prepare relevant contingencies and precautions to address these 5. identify the equipment required for loading/discharging the vessel, including that required for personal protection 6. brief all concerned clearly and correctly on the actions to be taken, ensuring that everyone understands their role and the emphasis upon safety 7. confirm the destination of the cargo and that there is adequate storage capacity available for the cargo expected, before beginning handling operations 8. ensure that the vessel is positioned securely, with appropriate moorings which allow for any necessary adjustments during loading/discharge 9. confirm that all connections are leak-free before transfer begins 10. operate equipment safely and according to operating instructions 11. monitor pipelines for leaks at all times, identifying and addressing any difficulties promptly and correctly 12. ensure that all pipelines and connecting hoses are empty before disconnecting and cleaning pipelines safely and correctly 13. shut down and secure correctly all equipment upon completion 14. deal with any residues and spillages promptly and correctly 15. keep working areas free of all obstructions and hazards 16. maintain accurate and up to date records of cargo transferred, where required 17. follow safe working procedures at all times |

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| Knowledge and understanding  You need to know and understand: | 1. organisation's procedures relating to the meeting of legislative and codes of practice requirements regarding the loading and discharge of bulk liquid cargo, and the relevant sections of this legislation 2. relevant national and international regulations and codes of practice relating to the carriage of dangerous cargo 3. the principal types of handling equipment for bulk liquid cargo, their operating capabilities and specific characteristics and restrictions 4. the factors to take into account when planning the loading and discharge of loads to/from vessels, including safe mooring practices, and the need to protect the local environment from potential pollution 5. the importance of maintaining vessel stability when loading and discharging, its relevance to ensuring the complete discharge of cargo, including the typical problems associated with the movement of weight on a vessel, and how to address these 6. the implications of back pressure and its significance in relation to pipeline systems 7. emergency shut down systems and procedures 8. procedures for flushing and pigging lines 9. the principal characteristics of the main types of bulk liquid cargo, including their nature and weight, and whether they are hazardous or non-hazardous 10. the correct terminology and use of instructions when loading and discharging vessels 11. the importance of clear communication both on the vessel and also with the receiver/supplier, and how to do this 12. vessel construction and operational characteristics relevant to loading and discharging bulk liquid cargo 13. procedures for dealing with emergencies when loading and discharging vessels |

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