



Australian Government

Assessment Requirements for MARC028 Operate deck machinery, cargo handling gear and equipment on a vessel

Release: 1

Assessment Requirements for MARC028 Operate deck machinery, cargo handling gear and equipment on a vessel

Modification History

Release 1. New unit of competency.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- applying risk assessment and hazard control strategies
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- completing required records related to the operation of deck machinery and cargo handling gear and equipment
- communicating with other workplace personnel using effective:
 - hand signals
 - hand held radios
 - listening techniques
 - questioning to confirm understanding and appropriate worksite protocol
 - signage
 - written instructions
- exercising all safety, environmental and hazard control precautions and procedures during the operation of deck machinery, cargo handling gear and equipment on a vessel
- following work schedules laid down in organisational instructions and safety management systems
- operating anchoring equipment under various conditions such as anchoring, weighing anchor, securing for sea and in emergencies
- reading, interpreting and applying instructions on the operation of deck machinery and cargo handling gear and equipment
- recognising faulty equipment and taking appropriate action
- recognising routine hazards and problems while operating deck machinery and cargo handling gear and equipment
- recognising routine hazards that can arise on a chemical and oil and liquefied gas tanker
- selecting and using relevant tools and equipment
- setting up, shutting down and storing welding, brazing, cutting equipment
- using and handling deck and cargo handling gear and equipment
- using basic signals to operate equipment including winches, cranes, windlasses and hoists
- working safely and collaboratively with others
- working safely at heights, and correctly applying and using safety equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- basic signals for the operation of equipment including winches, cranes, windlasses and hoists
- boom/jib movements and the safe positioning of the operator for any lift
- characteristics and features of bulk ship, chemical and oil tanker and liquefied gas tanker layouts and cargo
- communication techniques and signals needed during the operation of deck machinery and cargo handling gear and equipment
- correct method of replacing winch wire and/or rope and attaching new wire and/or rope to winch drum
- faulty and damaged wire and/or rope
- fibre and wire ropes, cables and chains including their construction, use markings, maintenance and proper stowage
- function and uses of:
 - cranes, pumps, hoists, cranes, booms and related equipment
 - hatches, watertight doors, ports and related equipment
 - winches, windlasses, capstans and related equipment
- fundamental properties of liquid and liquefied cargo and their impact on safety, the environment and vessel operations
- hazards and control measures associated with bulk ship, chemical and oil tanker, liquefied gas tanker cargo operations
- hazards and related safety precautions relevant to basic welding, brazing and cutting
- piping systems, valves, loading and unloading, care in transit and emergency shut down procedures
- principal features and operating characteristics of steering gear and deck machinery used on a range of vessel types
- problems related to operating deck machinery and cargo handling gear and equipment, and appropriate actions and solutions
- procedures for:
 - checking and inspecting deck machinery and cargo handling gear and equipment used on vessels
 - safe operation of deck machinery and cargo handling gear and equipment
- records that must be maintained on a vessel relevant to cargo handling and stowage
- relevant sections of maritime regulations, codes and conventions related to tankers and gas carriers
- relevant WHS/OHS requirements, work practices and pollution control regulations and policies

- safe working loads of ropes, wires, blocks, chains and lifting gear
- safety data sheets (SDSs)/material safety data sheets (MSDSs)
- safety, environmental and hazard control precautions and procedures relevant to the operation of deck machinery and cargo handling gear and equipment
- terminology relating to the structure, capacities and operations of various types of tankers and gas carriers
- use and general maintenance of lifting equipment and basic slinging techniques.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment of the operation of deck machinery and cargo handling gear and equipment must occur in workplace operational situations. Where this is not available, in simulated workplace operational situations that replicate workplace conditions.

Resources for assessment include access to:

- gas monitoring equipment including:
 - gas monitoring instruments
 - oxygen indicators
- relevant documentation including workplace procedures, regulations, codes of practice and operation manuals
- tools, materials, cargo handling equipment, piping systems and valves that replicate and are currently used in industry including:
 - basic hydraulic systems
 - cargo hatch covers
 - cranes and derricks
 - lifeboat davits
 - lifting equipment
 - mooring equipment
 - safeguards and protective devices for winches
 - small cranes, derricks and booms
 - gangways and pilot ladders
 - winches

- windlasses
- personal protective equipment currently used in industry including:
 - free fall arrest devices
 - safety harness
 - safety nets
 - static safety lines.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>