Assessment Requirements for MARA001 Contribute to safe cargo operations on liquefied gas tankers

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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 and performance criteria on at least one occasion and include:

- communicating clearly and effectively
- correctly identifying safety data sheets (SDS)/material safety data sheets (MSDS), relevant cargo-related hazards to vessel and to personnel, and taking appropriate action according to organisational procedures
- ensuring cargo operations are carried out according to accepted principles and procedures to ensure safety of operations
- identifying and acting on becoming aware of a hazardous situation, according to organisational procedures
- interpreting and applying knowledge of liquefied gas tanker layouts, tanker cargo features, characteristics and hazards, and related hazard prevention strategies to duties on various types of liquefied gas tankers
- reading and interpreting SDS/MSDS
- recognising problems and hazards that can arise when managing safety on a liquefied gas tanker, taking appropriate remedial action and initiating appropriate solutions.

Knowledge Evidence

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

- anti-static measures in hazard control
- atmospheric control
- cargo handling equipment
- cargo inhibition in hazard control
- corrosion hazards associated with tanker operations
- emergency shut-down system (ESD)
- environmental hazards associated with tanker operations
- explosion and flammability hazards associated with tanker operations
- extremely low temperatures associated with tanker operations
- gas testing
- general arrangement and construction of liquefied gas tankers
- health hazards associated with tanker operations

- importance of cargo compatibility
- inerting, drying and monitoring techniques in hazard control
- information on a SDS/MSDS
- loading, unloading and care in transit
- piping systems and valves
- pressure and temperature, including vapour pressure/temperature relationship
- pressure hazards associated with tanker operations
- properties and characteristics of liquefied gas
- reactivity hazards associated with tanker operations
- relevant chemical symbols
- relevant firefighting operations and the use of firefighting installations
- segregation in hazard control
- sources of ignition associated with tanker operations
- tanker cleaning, purging, gas-freeing and inerting
- tanker safety culture and safety management
- types of electrostatic charge generation
- types of liquefied gas tankers
- vapour leaks and clouds associated with tanker operations
- ventilation in hazard control
- work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices.

Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

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.
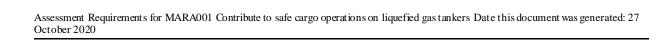
Resources for assessment must include access to:

- tools, equipment, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

Links

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