



Australian Government

Assessment Requirements for MARH026 Apply knowledge of dynamic positioning operations

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package.

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:

- describing conditions of dynamic positioning control, thrusters, sensors, position references, power, environment and miscellaneous that causes degrading of dynamic positioning status
- describing the use of capability plots (paper or electronic) and footprint plots to assess the capability of the vessel to complete dynamic positioning operations
- explaining rationale for planning dynamic positioning operations, including emergency and contingency situations which require the use of activity specific operational guidelines (ASOG), task appropriate mode (TAM) and critical activity mode of operation (CAMO)
- explaining requirements of contingency planning, including escape routes, position reference failures, sensors, weather, power, propulsion and worst case failures
- explaining the factors to be taken into account, subsequent to any system failure, in order to determine and carry out appropriate corrective actions, including:
 - changing dynamic positioning status
 - communication
 - monitoring stability of position and heading
 - when to terminate work
- explaining the rationale for keeping logbook records for all dynamic positioning operations, failures and incidents, operation, maintenance and repairs of dynamic positioning and ancillary equipment
- outlining alarms/warnings associated with loss of redundancy after worst case failure and the possible loss of heading or position if another failure occurs after a worst case failure (part loss of some thrusters and power) and catastrophic failure (loss of heading and/or position control)
- outlining of the use of ASOG in dynamic positioning degraded or emergency operations
- outlining the procedures to be followed by the dynamic positioning operator when taking over control of vessel's positioning and manoeuvring.

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:

- alarms and warnings and information messages provided on dynamic positioning system displays and on the dynamic positioning printer
- checklists to be completed prior to and during dynamic positioning operations
- communication to be used when conducting dynamic positioning operations
- contingency plans for foreseeable system failure and operational requirements, including:
 - escape routes
 - position reference failures
 - power
 - propulsion
 - sensors
 - weather
 - worst case failure
- conditions with dynamic positioning control, thrusters, sensors, position references, power, environment and miscellaneous that will lead to degraded dynamic positioning operational or emergency status
- documentation and records for dynamic positioning operations, including the content and purpose of:
 - annual trials reports
 - ASOG
 - CAMO
 - capability plots
 - capability plots (paper and electronic)
 - dynamic positioning manuals
 - FMEA
 - footprint plots
 - logbooks for all dynamic positioning operations, failures and incidents
 - operation, maintenance and repairs of dynamic positioning equipment and ancillary equipment
 - TAM
 - worksite diagrams
- hazards associated with dynamic positioning operations, including operating in:
 - shallow water
 - strong tidal conditions
 - very deep water
- keeping logbooks and records, including:
 - fault logs
 - International Maritime Contractor Association (IMCA) incident report form
 - position reference systems logs
 - records of operation, maintenance and repair of dynamic positioning system and ancillary equipment
- median rejection of when three or more are used and the importance of monitoring the

- position reference page
- methods used to apply weighting and pooling and voting when more than one position referencing system, including:
 - importance of monitoring the position reference page
 - medium rejection of when three or more position referencing systems are used
- planning for dynamic positioning operations, including:
 - ASOG
 - CAMO
 - contingencies
 - emergency situations
 - TAM
- procedures for conducting dynamic positioning operations, including:
 - taking over the control of the vessels positioning and manoeuvring
 - approaching a worksite
 - transferring from conventional navigation to dynamic positioning control
- alarms/warnings associated with loss of redundancy after worst case failure and the possible loss of heading or position if another failure occurs after a worst case failure (part loss of some thrusters and power) and catastrophic failure (loss of heading and/or position control)
- structure of alarm/warning and information messages provided on the dynamic positioning system displays and on the dynamic positioning printer
- use of the ASOG in dynamic positioning degraded or emergency operations and the factors to be taken into account, subsequent to any system failure, in order to determine and carry out appropriate corrective actions, including:
 - changing dynamic positioning status
 - communication
 - monitoring stability of position and heading
- warnings and alarms associated with degrading conditions for:
 - dynamic positioning control
 - environment
 - position references
 - power
 - sensors
 - thrusters
- watch handover procedures, including:
 - completing appropriate checklists
 - dynamic positioning status
 - field operations
 - status boards
 - vessel operations
 - vessel status
 - weather forecasts

- watch keeping procedures, including:
 - checklists
 - internal and external communications
 - maintaining lookout
 - manning of dynamic positioning console
 - observing recognised safe working practices, in relation to operations and dynamic positioning watch keeping.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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 replicate 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:

- applicable documentation, such as workplace procedures and dynamic positioning operational manuals, FMEA and capability plots. ASOG, TAM and CAMO
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>