



Australian Government

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.

Application

This unit involves the skills and knowledge required to apply knowledge of the operations of dynamic positioning, including its uses and applications.

This unit includes explaining routine dynamic positioning operations, applying position reference handling principles and emergency dynamic positioning operations principles.

This unit applies to people working in the maritime industry in the capacity of:

- Dynamic Positioning Operator.

Work is performed under limited supervision and applies to those responsible for operating dynamic positioning control systems in the work environment and who are responsible for their own work.

Before undertaking this unit, seafarers will need to hold or be working towards the achievement of one of the following:

- Chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more
- Chief engineer officers and second engineer officers on ships powered by main propulsion machinery of between 750 kW and 3,000 kW propulsion power
- Electro-technical officer
- Master or chief mate on ships of 3,000 Gross Tonnage (GT) or more
- Officers in charge of a navigation watch on ships of 500 GT or more
- Officers in charge of a navigational watch and Masters on ships of less than 500 GT
- Officers in charge of an engineering watch in a manned engine room or designated duty engineers in a periodically unmanned engine room.

Licensing/Regulatory Information

There are no legislative and regulatory requirements applicable to this unit at the time of publication.

Pre-requisite Unit

MARH025 Apply knowledge of dynamic positioning fundamentals

MARH027 Apply knowledge of dynamic positioning systems

Competency Field

H - Navigation

Unit Sector

Maritime Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Explain routine dynamic positioning operations

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Effective dynamic positioning watch keeping procedures are described
- 1.2** Pre-operational checks and checklists prior to and during dynamic positioning operations are described
- 1.3** Rationale for record keeping requirements for dynamic positioning operations are explained
- 1.4** Communication with personnel during dynamic positioning operations is outlined
- 1.5** Procedures to be followed by the dynamic positioning operator during handover, approaching a worksite and transferring from conventional navigation to dynamic positioning control are outlined
- 1.6** Structure of alarm/warning and information messages provided on the dynamic positioning system displays and printer are described
- 1.7** Rationale for using failure modes and effects analysis (FMEA), annual trials reports, capability plots, activity specific operational guidelines (ASOG), task appropriate mode (TAM) and critical activity mode of operation (CAMO) documentation during dynamic positioning operations is explained
- 1.8** Content of FMEA, annual trials reports, capability plots, ASOG, TAM and CAMO documentation during dynamic positioning operations is explained

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| | 1.9 | Rationale for planning dynamic positioning operations for emergency and contingency situations is explained |
| | 1.10 | Content of contingency plans to cover foreseeable system failure and operational failures is explained |
| | 1.11 | Use of worksite diagrams in dynamic positioning operations is explained |
| | 1.12 | Hazards associated with conducting dynamic positioning operations in areas of shallow water, very deep water and/or strong tidal conditions are outlined |
| 2 Apply position reference handling principles | 2.1 | Methods used to apply weighting, pooling and voting when multiple position referencing systems are in operation are outlined |
| | 2.2 | Median rejection when multiple position referencing systems are in operation and the importance of monitoring the position reference page is outlined |
| 3 Apply emergency dynamic positioning operations principles | 3.1 | Vessel and other data used to assess the capability of the vessel to successfully complete dynamic positioning operations without a loss of position after worst case failure is described |
| | 3.2 | Conditions which cause the degrading dynamic positioning operational and emergency status are described |
| | 3.3 | Warnings and alarms incorporated into dynamic positioning installations to make personnel aware of degrading conditions are described |
| | 3.4 | Alarms/warnings associated with loss of redundancy after worst case failure and foreseeable loss of heading or position and catastrophic failure as a result of worst case failure are described |
| | 3.5 | ASOG in dynamic positioning degraded or emergency operations are described |
| | 3.6 | Factors to be taken into consideration to carry out appropriate corrective actions are explained |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of

competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the MAR Maritime Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit. No equivalent unit.

Links

Companion Volume Implementation Guides are found in VETNet -

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