



Australian Government

MARH028 Conduct 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 conduct dynamic positioning operations.

This unit includes operating a dynamic positioning system. It also includes:

- planning, setting up and monitoring of dynamic positioning operations
- conducting dynamic positioning watchkeeping handover
- responding to emergency situations.

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

No licensing, legislative and regulatory requirements apply 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

MARH026 Apply knowledge of dynamic positioning operations

Competency Field

N - Navigation

Unit Sector

Maritime Sector

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan dynamic positioning operations

PERFORMANCE CRITERIA

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

- 1.1 Vessel plans, specifications, capability diagrams, related documentation and data are analysed to assess the capability of the vessel to complete and conduct dynamic positioning operations
- 1.2 Risk assessment is conducted, levels of redundancy are determined and are appropriate for proposed operations
- 1.3 Contingency plans are developed to address risks of system failure and operational requirements are appropriate
- 1.4 Dynamic positioning watchkeeping procedures are organised in accordance with workplace procedures and operational plans
- 1.5 Regulatory and legislative requirements are complied with in accordance with workplace procedures and operational plans

2 Set up dynamic positioning operations

- 2.1 Vessel is checked to ensure that it is on dynamic positioning in accordance with the vessel's class, vessel's operation manual, procedures and checklists
- 2.2 Alarms and warning limits are determined and set to meet organisational requirements
- 2.3 Position reference systems for dynamic positioning operations are determined and selected to meet

operational requirements

- 2.4 Position reference systems are determined and selected in accordance with dynamic positioning class
- 2.5 Thruster allocation is determined and selected to meet operational requirements and weather conditions
- 2.6 Vessel's manoeuvring capability is tested
- 2.7 Safe position and minimum distances are determined to ensure vessel is stabilised in dynamic positioning
- 2.8 Clearance for dynamic positioning operations is obtained
- 2.9 Set-up, location and change of watch checklists and task-specific checklists are completed in accordance with workplace procedures

3 Monitor dynamic positioning operations

- 3.1 Data from dynamic positioning system is monitored to ensure vessel positioning is maintained in accordance with operational plans and procedures
- 3.2 Performance checks of dynamic positioning systems are carried out according to operational procedures
- 3.3 Information obtained from dynamic positioning system is interpreted and analysed taking into account limitations of equipment, prevailing circumstances and conditions
- 3.4 Alarms and warning lights are responded to within required time constraints and dynamic positioning is maintained
- 3.5 Situational awareness of the vessel's status, operation and impact of operating under dynamic positioning is maintained
- 3.6 Lookout and awareness of the external situation, including weather when controlling a vessel close to installations or other objects, is maintained
- 3.7 Vessel positioning manoeuvres and station keeping functions are carried out in accordance with operational plans and procedures
- 3.8 Movement of vessel and changes in the position and heading are monitored and safe excursion limits are maintained

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| | 3.9 | Vessel is transferred from manual joystick to dynamic positioning control in accordance with workplace procedures |
| | 3.10 | Clear communication during dynamic positioning operations is maintained, and clarification is sought from, or given to, other team members when information or instructions are not clearly understood |
| | 3.11 | Logbooks and records are maintained during dynamic positioning operations in accordance with organisational procedures |
| 4 Conduct dynamic positioning watchkeeping handover | 4.1 | Handover and relief of dynamic positioning operator is completed according to organisational procedures and safe working practices |
| | 4.2 | Warning and alarm messages their content and information are communicated clearly and accurately during handover process and evaluated by dynamic positioning operator |
| 5 Respond to emergency situations | 5.1 | Nature of emergency and level of urgency are identified promptly and actions taken in accordance with organisational procedures |
| | 5.2 | Conditions and factors of system failure and degraded operations are determined, evaluated and communicated |
| | 5.3 | Vessel position and heading are stabilised, and actions appropriate to the urgency of the situation and nature of emergency are carried out in accordance with contingency plans |

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 Industry 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>