



Australian Government

MARH5001A Apply command navigation procedures on vessels limited by tonnage or near coastal operations

Release 1

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Modification History

Release 1

This is the first release of this unit.

This unit replaces and is equivalent to TDMMH1707A Apply command navigation procedures on vessels limited by tonnage or near coastal operations.

Unit Descriptor

This unit involves the skills and knowledge required to manage safe navigational watchkeeping on a commercial ocean-going vessel in compliance with Australian and international regulations and guidelines, protection of the marine environment and the safety of vessel and persons on board.

Application of the Unit

This unit applies to people who work in the maritime industry as Master or Chief Mate on a vessel of up to 500 gross tonnage (GT) or as a Watchkeeper on a vessel up to 3000 GT or as Master or Chief Mate on vessels up to 3000 GT operating in near coastal waters.

The unit is consistent with the relevant sections of STCW 95 and Marine Orders under the Australian Navigation Act 2012.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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| 1 Establish safe watchkeeping procedures on vessels, potentially with limited qualified personnel | <div style="display: flex; align-items: flex-start;"><div style="margin-right: 10px; flex: 1;"><div>1.1</div><div>1.2</div><div>1.3</div><div>1.4</div><div>1.5</div><div>1.6</div><div>1.7</div><div>1.8</div><div>1.9</div><div>1.10</div><div>1.11</div></div><div><p>Set of Master standing orders is developed to supplement vessel safety management system (SMS) noting number of watchkeeping personnel</p><p>Accepted principles, vessel safety management procedures and Master standing orders are conformed with in conduct, handover and relief of watch</p><p>Appropriate bridge team is established according to vessel SMS and bridge personnel are confirmed as fit for duty</p><p>Duties are assigned to members of bridge team and their performance of those duties is monitored</p><p>Members of bridge team are correctly briefed on their duties</p><p>Action is taken to ensure vessel is navigated safely using appropriate position fixing techniques to check location the vessel and to maintain movement of vessel within planned limitations</p><p>Action is taken to ensure progress of vessel with respect to passage plan is analysed and vessel navigation is managed appropriately to maintain a required estimated time of arrival at a point in the plan</p><p>Accepted principles and procedures are conformed with in relation to frequency and extent of monitoring of traffic, vessel and environment</p><p>Responsibility for safety of navigation is defined according to vessel SMS</p><p>Safe navigational practice is achieved by implementing accepted bridge resource management principles and procedures</p><p>Action is taken to ensure fatigue management strategies are correctly applied by bridge management team</p></div></div> |
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| 2 Respond to potential collision and emergency situations | <ul style="list-style-type: none">2.1 Leadership of bridge team is taken when called to bridge in response to navigational situation2.2 Circumstances when assistance is required when Master is performing watchkeeping duties are identified2.3 Potential collision situations are analyse and appropriate action is taken to avoid collision in ample time and in compliance with international collision regulations, resulting in a safe passing distance and following practices of good seamanship2.4 SMS procedures and compliance with standard watchkeeping principles are correctly implemented when taking over bridge watch from officer of the watch2.5 Appropriate action is taken to initiate search and rescue procedures on receipt of a distress signal2.6 Appropriate advice is given to watchkeepers and correct actions are implemented regarding a response to navigational or operational <i>emergency situations</i> |
| 3 Maintain watchkeeping records | <ul style="list-style-type: none">3.1 Relevant information is documented in required records3.2 Action is taken to ensure deck log book and other required records are maintained in an appropriate manner3.3 Required records are filed and stored according to organisational procedures |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required Skills:

- Assess:
 - circumstances requiring Master to call for assistance from a second qualified watchkeeper
 - necessary action when called to bridge by officer of watch
- Brief officers of watch on passage plan and their watchkeeping duties
- Communicate effectively with other personnel when managing safe navigational watchkeeping activities
- Comply with mandatory rules, regulations and IMO Conventions and Codes, including relevant sections of AMSA Marine Orders and ensure codes, guidelines and standards recommended by IMO, classification societies and maritime industry organisations are taken into account
- Conduct emergency procedures
- Determine:
 - actions to take with respect to executing passage plan
 - most important watchkeeping task at any given time
- Exchange information with pilot about pilotage plan and conduct of bridge team
- Perform pilotage duties, where permitted
- Provide leadership to bridge team
- Recognise situations warranting alterations to bridge team, including situations where vessel is under pilotage
- Solve problems that may arise when managing bridge team
- Use available technology when managing navigational watchkeeping activities

Required Knowledge:

- Applicable legislation, regulations and codes of practice
- Bridge watch handover procedures
- Causes of groundings, collisions and casualties when on board vessel
- Documentation and records, including:
 - operational orders
 - Master standing and night orders
 - established passage plan
 - navigational charts
 - relevant maritime regulations as they relate to watchkeeping functions and operations during a coastal voyage
 - vessel log

- company SMS
- instructions of relevant maritime authorities
- Range of factors that can affect watchkeeping functions on vessels under 500 GT and their implications, including:
 - maintaining proper lookout by all available means at all times
 - need to adhere to established passage plan
 - never leaving the bridge unattended
 - weather and sea conditions, visibility and whether there is daylight or darkness
 - proximity of navigational hazards
 - use and operational condition of navigational aids
 - operational status of bridge instrumentation, controls and alarms
 - provision on bridge of unmanned machinery space (UMS) controls, alarms and indicators
 - unusual demands on navigational watch arising from operational conditions
 - traffic density and other activities occurring in area in which vessel is navigating
 - size of vessel and field of vision available from conning position
 - attention necessary when navigating in or near traffic separation schemes or other routeing measures
 - rudder and propeller control and vessel manoeuvring characteristics
- Fatigue management principles and techniques
- Navigational aids including:
 - compass and azimuth mirror
 - electronic navigation systems
 - radar
 - electronic charts
- Navigational hazards during voyage and implications for watchkeeping
- Precautions necessary when navigating in or near traffic separation schemes or other routeing measures
- Principles for maintaining a safe navigational watch on vessels with potentially limited qualified personnel
- Principles of bridge team management
- Regulations for preventing collisions at sea (Colregs)
- Relevant work health and safety (WHS)/occupational health and safety (OHS) legislation and policies

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, the required skills and knowledge, the range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include:

- ensuring established passage plan is correctly carried out
- taking prompt action to report and/or rectify watchkeeping incidents according to established procedures
- completing work systematically with required attention to detail
- recognising and adapting appropriately to cultural differences in the workplace, including modes of behaviour, and interactions and communication with others
- managing watchkeeping arrangements while underway, when berthed or moored, when slipped or in dry dock, during routine or unplanned events.

Context of and specific resources for assessment

Performance is demonstrated consistently over time and in a suitable range of contexts.

Resources for assessment include access to:

- industry-approved marine operations site where applying command navigation procedures on vessels limited by tonnage or near coastal operations can be conducted
- tools, equipment and personal protective equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on work activities
- range of relevant exercises, case studies and/or other simulated practical and knowledge assessments
- appropriate range of relevant operational situations in the workplace.

In both real and simulated environments, access is required to:

- relevant and appropriate materials and equipment
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals.

Method of assessment

Practical assessment must occur in an:

- appropriately simulated workplace environment and/or
- appropriate range of situations in the workplace.

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate to this unit:

- direct observation of the candidate applying command navigation procedures on vessels limited by tonnage or near coastal operations
- direct observation of the candidate applying relevant WHS/OHS requirements and work practices.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

In all cases where practical assessment is used it should be combined with targeted questioning to assess Required Knowledge.

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

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below.

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| Principles may include: | <ul style="list-style-type: none">• Ensuring proper watch is maintained at all times, including correct response to avoiding collision and maintaining safe navigation of vessel passage• Making appropriate assistance available to be summoned to bridge if required by change in vessel situation• Taking all necessary precautions to avoid pollution of marine environment |
| Responsibility for safety of navigation must include: | <ul style="list-style-type: none">• Periods under pilotage• Periods when Master is on bridge |
| Fatigue management strategies may include: | <ul style="list-style-type: none">• Arranging assistance for watchkeepers when symptoms of fatigue are identified• Ensuring avoidance of excessive consumption of alcohol prior to watchkeeping duties• Following appropriate dietary habits• Maintaining personal fitness and health• Planning appropriate actions when un-fatigued personnel are not available• Recognising symptoms of fatigue |
| Emergency situations may include: | <ul style="list-style-type: none">• Cargo shift• Distress signal• Dragging anchor• Entry into confined spaces• Failure of bridge equipment, steering equipment, navigational lights• Fire• Fog and restricted visibility• Fouled hawse• Heavy weather• Intoxicated persons on board vessel• Loss of:<ul style="list-style-type: none">• main engines• mooring lines or winches when berthing• watertight integrity• Person overboard• Personnel working aloft or overside• Possible collision• Retrieval of survivors from water |

- Stranding
- Sudden list or loll
- Synchronous rolling

Unit Sector(s)

Not applicable.

Competency Field

Navigation