



Australian Government

Department of Education, Employment and Workplace Relations

TDMMH1807A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS (UNLIMITED)

Revision Number: 1

TDMMH1807A APPLY COMMAND NAVIGATION PROCEDURES ON VESSELS (UNLIMITED)

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

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

Application of the Unit

Application of the unit	The unit has application in qualifications for Master or Chief Mate on a vessel of 500 gross tonnage or more operating in international waters, i.e. Advanced Diploma of Transport&Distribution(Maritime Operations - Master Unlimited).
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant sections of STCW 95 and Marine Orders under the Australian Navigation Act 1912, describing requirements for a Master or Chief Mate on a vessel of 500 gross tonnage or more operating in international waters.
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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.</i>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Ensure safe watchkeeping procedures	- a A set of master's standing orders to supplement the vessel's safety management system is prepared - b The conduct, handover and relief of the watch conforms with accepted principles, the vessel's safety management procedures and Master's standing orders - c An appropriate bridge team is established in accordance with the vessel's safety management system and bridge personnel are confirmed as fit for duty - d Duties are assigned to members of the bridge team and the performance of those duties are monitored - e Members of the bridge team are briefed on their duties - f Appropriate action is taken to ensure that the vessel is navigated safely using appropriate position fixing techniques to check the location of the vessel and to maintain the movement of the vessel within planned limitations. - g Appropriate action is taken to ensure that the progress of the vessel with respect to a passage plan is analysed and speed and course adjusted as appropriate to maintain a required estimated time of arrival at a point in the plan

ELEMENT	PERFORMANCE CRITERIA
	h Appropriate action is taken to ensure that the frequency and extent of monitoring of traffic, the vessel and the environment conform with accepted principles and procedures
ELEMENT	PERFORMANCE CRITERIA
1 Ensure Safe watchkeeping procedures (continued)	i The responsibility for the safety of navigation is defined in accordance with the vessel's safety management system, including periods when the master is on the bridge and while under pilotage j Safe navigational practice is achieved through the implementation of accepted bridge resource management principles and procedures k Appropriate action is taken to ensure that fatigue management strategies are correctly applied within the bridge management team
2 Respond to potential collision and emergency situations	a Bridge team is taken charge of when called to the bridge in response to a navigational situation b Safety management system procedures are implemented when taking over the bridge watch from the officer of the watch c Appropriate action is taken to initiate search and rescue procedures on receipt of a distress signal d Advice is provided to watchkeeper regarding the response to navigational incidents
3 Maintain watchkeeping records	a Action is taken to ensure that the Deck Logbook is maintained in an appropriate manner

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 IMO STCW 95 Convention and Codes and AMSA Marine Orders applicable to the management of cargo handling operations
- 2 Principles for maintaining a safe navigational watch
- 3 Regulations for the prevention of collisions at sea (Colregs)
- 4 Principles of bridge team management
- 5 Precautions necessary when navigating in or near traffic separation schemes or other routeing measures
- 6 Watch handover procedures
- 7 Relevant OH&S legislation and policies
- 8 Implications of a range of factors that can affect watchkeeping functions
- 9 Causes of groundings, collisions and casualties when on board vessel
- 10 Navigational hazards during a voyage and implications for watchkeeping
- 11 Fatigue management principles and techniques

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Communicate effectively with other personnel when managing safe navigational watchkeeping
- 2 Interpret and follow procedures for managing safe navigational watchkeeping
- 3 Assess necessary action when called to the bridge by the officer of the watch
- 4 Determine actions to take with respect to the execution of a passage plan
- 5 Brief the officer of the watch on the passage plan and their watchkeeping duties
- 6 Recognise situations warranting alterations to the bridge team, including when the vessel is under pilotage
- 7 Exchange of information with a pilot with respect to the pilotage plan and the

REQUIRED KNOWLEDGE

- conduct of the bridge team
- 8 Conduct emergency procedures
- 9 Determine which watchkeeping task is the most important at any given time

Evidence Guide

Evidence Guide

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The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

1 Critical aspects of evidence required to demonstrate competency in this unit	Assessment must confirm appropriate knowledge and skills to: - a Establish watchkeeping arrangements and procedures - b Manage watchkeeping operations on a vessel - c Take appropriate action when called to the bridge in the event of a potential collision or other emergency situation - d Communicate effectively with others in the course of watchkeeping duties
2 Evidence required for demonstration of consistent performance	- a Performance is demonstrated consistently over a period of time and in a suitable range of contexts - b Applies underpinning knowledge and skills when 1 managing watchkeeping on a vessel 2 identifying and evaluating watchkeeping performance and determining appropriate courses of action 3 identifying and implementing improvements to bridge management procedures

Evidence Guide

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- 4 applying safety precautions relevant to watchkeeping operations
- c Shows evidence of application of relevant workplace procedures, including
 - 1 relevant sections of maritime regulations
 - 2 OH&S regulations and hazard prevention policies and procedures
 - 3 job procedures and work instructions
 - 4 relevant guidelines relating to bridge management and watchkeeping arrangements on board a vessel engaged on a coastal voyage
 - 5 following bridge housekeeping processes
- d Action is taken promptly to report and/or rectify watchkeeping incidents in accordance with established procedures
- e Work is completed systematically with required attention to detail
- f Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions and communication with others

Evidence Guide (continued)

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3 Context of assessment

- a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations
- b Assessment of this unit must be undertaken within relevant marine authority approved and audited arrangements by a registered training organisation:

Evidence Guide (continued)

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	1 As a minimum, assessment of knowledge must be conducted through appropriate written/oral examinations, and 2 Appropriate practical assessment must occur: - i at the registered training organisation; and/or - ii on an appropriate working or training vessel
4 Specific resources required for assessment	Access is required to opportunities to: - a demonstrate the ability to manage a safe watch in range of suitably simulated of watchkeeping situations using an integrated vessel's bridge simulator; and/or - b manage a safe watch on a vessel in an appropriate range of situations and weather and sea conditions

Range Statement

Range Statement

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The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

VARIABLE

SCOPE

1. GENERAL CONTEXT

a. Work must be carried out:	1 in compliance with the relevant maritime regulations

Range Statement

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b. Work is performed:	1 as the leader of a bridge team under broad operational requirements, with accountability and responsibility for self and others in achieving the prescribed outcomes. It involves the application of nautical principles and watchkeeping techniques across a wide and often unpredictable variety of operational contexts. Implementation of the vessel's watchkeeping plan is required. Accountability and responsibility for self and others in achieving the required watchkeeping functions is involved
d. Work requires:	1 judgement and leadership in monitoring and supplementing watchkeeping duties and procedures during a voyage

2. WORKSITE ENVIRONMENT

a Vessel may include:	1 any Australian or international commercial vessel
b Watchkeeping arrangements and procedures may be implemented:	1 by day or night in both normal and emergency situations 2 under any possible conditions of weather and loading 3 while underway 4 during berthing and unberthing operations 5 while anchoring or mooring 6 while in port 7 while moored or at anchor

Range Statement (continued)

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VARIABLE	SCOPE
c Watchkeeping management principles include:	1 ensuring that a proper watch is maintained at all times 2 taking all necessary precautions to avoid pollution of the marine environment 3 making available appropriate assistance to be summoned to the bridge if required by a change in the vessel's situation
d Fatigue management strategies may include:	1 recognition of symptoms of fatigue 2 arranging assistance for watchkeepers when symptoms of fatigue are identified 3 maintenance of personal fitness and health 4 appropriate dietary habits 5 ensuring the avoidance of excessive consumption of alcohol prior to watchkeeping duties
e Emergencies and potentially dangerous navigational situations may include:	1 fire 2 stranding 3 possible collision 4 heavy weather 5 synchronous rolling 6 distress signal 7 failure of bridge equipment, steering equipment, navigational lights

Range Statement (continued)

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| 8 | loss of main engines |
| 9 | person overboard |
| 10 | fog and restricted visibility |
| 11 | cargo shift |
| 12 | retrieval of survivors from the water |
| 13 | loss of watertight integrity |
| 14 | intoxicated persons on board vessel |
| 15 | dragging anchor |
| 16 | fouled hawse |
| 17 | loss of mooring lines or winches when berthing |
| 18 | entry into confined spaces |
| 19 | personnel working aloft or overside |
| 20 | sudden list or loll |

Range Statement (continued)

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VARIABLE	SCOPE								
f Factors to be taken into account when monitoring watchkeeping duties:	<table border="1"> <tr><td>1</td><td>need to adhere to the established passage plan</td></tr> <tr><td>2</td><td>a proper look-out by all available means must be maintained at all times</td></tr> <tr><td>3</td><td>bridge must never be left unattended</td></tr> <tr><td>4</td><td>weather and sea conditions, visibility and whether there is</td></tr> </table>	1	need to adhere to the established passage plan	2	a proper look-out by all available means must be maintained at all times	3	bridge must never be left unattended	4	weather and sea conditions, visibility and whether there is
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Range Statement (continued)

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	daylight or darkness
5	proximity of navigational hazards
6	use and operational condition of navigational aids
7	the operational status of bridge instrumentation, controls and alarms
8	provision on the bridge of unmanned machinery space (UMS) controls, alarms and indicators
9	unusual demands on the navigational watch arising from operational conditions
10	traffic density and other activities occurring in the area in which the vessel is navigating
11	the size of the vessel and the field of vision available from the conning position
12	the attention necessary when navigating in or near traffic separation schemes or other routeing measures
13	rudder and propeller control and vessel manoeuvring characteristics
g Available navigational aids may include, but are not restricted to:	1 compass and azimuth mirror 2 electronic navigation systems 3 radar 4 electronic charts 5 other equipment affecting the safe navigation of the vessel
f Documentation and records	1 operational orders 2 master's standing and night orders

Range Statement (continued)

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may include:	3	navigational charts
	4	relevant maritime regulations as they relate to watchkeeping functions and operations during a coastal voyage
	5	vessel's log
	6	company safety management system
	7	instructions of relevant maritime authorities

Range Statement (continued)

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VARIABLE	SCOPE
g Applicable legislation, regulations and codes may include:	1 IMO STCW 95 Convention and Code 2 relevant sections of AMSA Marine Orders 3 International Regulations for Preventing Collisions at Sea 4 relevant international, Commonwealth, State and Territory OH&S legislation

Unit Sector(s)

Not applicable.

Field

Field MH Navigation

Relationship to other units

Relationship to other units	The unit may be assessed in conjunction with other units that relate to the functions of the occupation(s) concerned.
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