



Australian Government

Department of Education, Employment and Workplace Relations

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80METRES

Revision Number: 1

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80METRES

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to monitor the condition and seaworthiness of a coastal vessel up to 80 metres, including an awareness of the fundamental principles of vessel construction, load-lines, conditions of assignment, structural elements to restrain fires and flooding, design characteristics that contribute to watertight integrity and fulfil regulatory requirements for seaworthiness.

Application of the Unit

Application of the unit	The unit has applications in qualifications for a Master 4 and Skipper 2 operating a vessel of less than 80 metres in length within inshore limits (15 nm) and less than 35 metres within ACMW (600 nm), i.e. Certificate IV in Transport&Distribution (Coastal Maritime Operations - Master Class 4).
--------------------------------	--

Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant maritime regulations describing mandatory minimum requirements for a Master 4/Skipper 2. This includes applicable sections of State/Territory maritime licensing and regulatory requirements and the National Standard for Commercial Vessels (NSCV) and the USL Code.
---	---

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>
--	--

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Monitor the condition of a vessel up to 80 m in length	- a Work to monitor condition and seaworthiness of the vessel is planned and carried out in accordance with procedures and safety regulations - b Ensure that coverage and frequency of checks and inspections on the vessel complies with established procedures - c Checks of the integrity of the vessel's hull are correctly carried out, including the use of a testing tank where required - d Action taken in anticipation of environmental changes is timely and appropriate to the change - e Action taken in emergency situations is appropriate to the significance of the situation and ensures watertight integrity - f Precautions are taken to ensure that vessel and on-board powered equipment is operated in accordance with manufacturer's instructions and regulations

ELEMENT	PERFORMANCE CRITERIA
2 Rectify identified problems with the condition of the vessel	a Any deterioration of the vessel's hull or structure is examined and reported and appropriate action is initiated to fix the identified problem

ELEMENT	PERFORMANCE CRITERIA
2 Rectify identified problems with the condition of the vessel (continued)	b Repairs and corrosion control are initiated and coordinated in accordance with procedures and manufacturer's instructions c Communication with owners, officers, crew and others concerning the condition and seaworthiness of the vessel and related action is clear, concise and made at an appropriate time and place d Records of problems identified and actions taken to carry out repairs and corrosion control and to ensure watertight integrity are complete, accurate and comply with requirements.

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Relevant State and Territory maritime regulations applicable to coastal vessels up to 80 m
- 2 Procedures for the checking and inspecting the seaworthiness of a coastal vessel up to 80 m
- 3 The principal stresses which act on the structure of a vessel up to 80 m
- 4 Principles and procedures to ensure the watertight integrity of a vessel's hull in both normal and emergency situations
- 5 Damage control measures that may be required to maintain the integrity of the hull in a range of typical emergency situations that could occur on a vessel up to 80 m
- 6 Procedures for the initiation and coordination of repair and/or replacement on board small vessels
- 7 Corrosion control measures used on a vessel, including surface preparation and painting and antifouling
- 8 Safety, environmental and hazard control precautions and procedures
- 9 A basic understanding of the properties and application of materials used in the construction of vessels up to 80 m
- 10 Construction, layout and subdivision requirements of various types of vessels up to 80 m, including an understanding of freeboard and bulkhead deck, watertight compartments, weathertight compartments of the vessel
- 11 Records that must be maintained concerning the seaworthiness of a vessel of a vessel up to 80 m

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES
--

REQUIRED SKILLS

This describes the basic skills required for this unit.

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

- 1 Use verbal communication skills required when monitoring the condition and seaworthiness of a vessel up to 80 m
- 2 Read, interpret and apply basic instructions, plans and drawings relevant to monitoring the condition and seaworthiness of a vessel up to 80 m
- 3 Work safely and collaboratively with others when monitoring the condition and seaworthiness of a vessel up to 80 m
- 4 Select and use equipment as per operating instructions
- 5 Recognise problems concerning the condition and seaworthiness of a vessel and take appropriate action
- 6 Adapt to changes in equipment and procedures in the workplace
- 7 Follow required work schedule as per company requirements
- 8 Follow all required OH&S procedures and precautions
- 9 Secure the watertight integrity of a small vessel up to 80 m before it puts to sea
- 10 Check and inspect the seaworthiness and watertight integrity of a vessel up to 80 m in all weather and sea conditions

Evidence Guide

Evidence Guide TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

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: <ol style="list-style-type: none">a Monitor and evaluate the condition and seaworthiness of a vessel up to 80 m under normal and emergency situationsb Identify any deterioration of the vessel's hull, structure or |
|---|---|

Evidence Guide TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

	equipment c Take appropriate preventative and remedial action to maintain the security and watertight integrity of the vessel's hull d Initiate and coordinate maintenance, repair or replacement of faulty or damaged equipment or vessel's structure in accordance with company procedures and manufacturer's instructions e Exercise all required safety, environmental and hazard control precautions and procedures during inspection and maintenance operations f Communicate effectively with others when taking action to maintain the seaworthiness of the vessel
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 Consistently applies underpinning knowledge and skills when: 1 carrying out routine and emergency monitoring of a vessel's seaworthiness 2 identifying and evaluating problems concerning the condition of a vessel and the integrity of its hull and determining appropriate courses of action 3 initiating and coordinating any required repair or maintenance activities to ensure the seaworthiness of a vessel 4 applying safety precautions relevant to monitoring, repair and maintenance operations c Shows evidence of application of relevant workplace procedures, including: 1 relevant maritime regulations 2 OH&S regulations and hazard prevention policies and

Evidence Guide

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

procedures

- 3 job procedures and work instructions
- 4 relevant vessel manufacturer's guidelines relating to the seaworthiness the vessel

Evidence Guide (continued)

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

Evidence 2 required for demonstration of consistent performance (continued)	5 procedures to protect the integrity and security of the vessel's hull d Action is taken promptly to report and/or rectify problems with the seaworthiness of a vessel and the integrity of its hull 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 among crew and others
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: 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

Evidence Guide (continued)

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

4 Specific resources required for assessment

Access is required to opportunities to:

- a participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to monitor the condition and the seaworthiness of a vessel up to 80 m in a range of operational situations; and/or
- b assist in maintaining the seaworthiness of a vessel in a range of operational situations either:
 - i using a suitable simulator over an appropriate range of simulated loading and operational situations
 - ii in appropriate practical situations on an operational commercial or training vessel up to 80 m

Range Statement

Range Statement

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

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 applicable to monitoring the condition and seaworthiness of a small vessel up to 80 m

Range Statement

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

b. Work is performed:	1 within a defined range of operations and routine procedures, with responsibility for own outputs in relation to specified quality standards and some responsibility for others
c. Work involves:	1 the conduct of routine monitoring of condition and seaworthiness of a vessel and the specification of solutions to a defined range of typical problems concerning deterioration of a vessel's hull, structure and equipment
d. Work requires:	1 some discretion and judgement in initiating action to report and rectify identified problems with the condition and seaworthiness of the vessel

2. WORKSITE ENVIRONMENT

a Vessel may include:	1 any small Australian commercial vessel up to 80 m
b Seaworthiness of a vessel must be maintained:	1 by day or night in both normal and emergency situations 2 under any possible conditions of sea, weather and loading 3 while underway 4 during berthing and unberthing operations 5 while anchoring or mooring 6 prior to and during slipping

Range Statement (continued)

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

VARIABLE	SCOPE
c Action taken to monitor the condition and seaworthiness of a vessel up to 80 m may include:	1 routine inspections 2 checks prior to departure 3 checks on completion of a voyage 4 checks on completion of maintenance activities 5 checks throughout a voyage in anticipation of any change in sea and weather conditions 6 testing of tanks to check watertight integrity 7 checks during an emergency which may have caused damage or changes to the seaworthiness of the vessel 8 checks on a slipway prior to refloating a vessel
d Repair and maintenance procedures for a small vessel up to 80 m may include:	1 testing and inspection of all accessible parts of a vessel's hull and structures 2 repairs to equipment, components, hull and vessel's structure 3 surface preparation and painting 4 antifouling and maintaining underwater sections 5 lubrication 6 replacement of faulty equipment or components
e Documentation and records may include:	1 relevant maritime regulations applicable to monitoring the condition and seaworthiness of a vessel up to 80 m 2 procedures for monitoring of condition and seaworthiness of

Range Statement (continued)

TDMMB607B MONITOR CONDITION AND SEAWORTHINESS OF A COASTAL VESSEL UP TO 80 METRES

	a vessel up to 80 m
	3 vessel and equipment manufacturer's instructions, specifications and recommended procedures
	4 instructions of relevant maritime authorities related to the seaworthiness of vessels
	5 maintenance schedules and records
f Applicable legislation, regulations and codes may include:	1 relevant sections of NSCV and regulations of State and Territory marine authorities related to the operation of a vessel up to 80 m 2 relevant Commonwealth, State and Territory OH&S legislation

Unit Sector(s)

Not applicable.

Field

Field B Equipment Checking and Maintenance

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.
------------------------------------	---