



Australian Government

MARK005 Steer a vessel under direction of the Master

Release: 1

MARK005 Steer a vessel under direction of the Master

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to steer a vessel under the direction of the Master, complying with helm orders.

This unit applies to an individual working as an Integrated Rating or Able Seafarer-Deck on a range of vessels.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

K – Manoeuvring Vessels

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Steer a steady course within acceptable limits in normal conditions under the direction of the Master

PERFORMANCE CRITERIA

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

- | | |
|-----|---|
| 1.1 | Features of vessel that relate to its handling characteristics are recognised |
| 1.2 | Navigational equipment is used to steer a steady course |
| 1.3 | Situational awareness is maintained to ensure safety of vessel |
| 1.4 | Propulsion equipment is used and monitored to assist in steering a steady course within acceptable limits, having |

- regard to the area of navigation and prevailing state of sea
- 1.5 Safe operating limits of propulsion and steering equipment are not exceeded
 - 1.6 Automatic pilot and hand steering are used to steer a steady course, and course is altered smoothly and in a controlled way
 - 1.7 Helm orders are followed and effective communication is maintained with the Master on matters relevant to the safety and integrity of the vessel
- 2 Steer a vessel in adverse weather conditions under the direction of the Master**
- 2.1 Nature of adverse weather conditions is identified and potential impact on the manoeuvrability of the vessel is determined and confirmed with the Master
 - 2.2 Propulsion equipment is used and monitored to assist in steering a steady course within acceptable limits, having regard to the area of navigation and prevailing state of sea
 - 2.3 Safe operating limits of propulsion and steering equipment are not exceeded
 - 2.4 Situational awareness is maintained at all times to review actions and ensure the safety of the vessel
 - 2.5 Automatic pilot and hand steering are used to steer a steady course, and course is altered smoothly and in a controlled way
 - 2.6 Helm orders are followed and effective communication is maintained with the Master on matters relevant to the safety and integrity of the vessel
- 3 Steer a vessel in emergencies under the direction of the Master**
- 3.1 Nature of the emergency is established and required action is determined and confirmed with the Master
 - 3.2 Helm orders are followed and effective communication is maintained with the Master on matters relevant to the safety and integrity of the vessel
 - 3.3 Vessel is steered during the emergency to maintain the safety of the vessel and those on board, and any other vessels or persons involved in the emergency
 - 3.4 Propulsion equipment is used under the direction of the Master and is monitored to assist in completing steering safely

	3.5	Safe operating limits of propulsion and steering equipment are not exceeded
4 Steer a vessel while towing and being towed under the direction of the Master	4.1	Correct towing procedures and precautions are applied when towing and being towed in relation to helm orders
	4.2	Helm orders are followed and effective communication is maintained with the Master on matters relevant to the safety and integrity of the vessel

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 can be found in the Companion Volume Implementation Guide.

- Emergency includes one or more of the following:
- beaching
 - collision
 - disabled or partially disabled vessel
 - grounding
 - person overboard

Unit Mapping Information

This unit replaces and is equivalent to MARK3002A Steer a vessel under direction of the Master.

MARK3002A replaces and is equivalent to TDMMC1007C Steer a domestic vessel under the direction of the master or officer in charge of the watch.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MARK005 Steer a vessel under direction of the Master

Modification History

Release 1. New unit of competency.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- changing from automatic pilot to hand steering and changing from hand steering to automatic pilot
- ensuring behaviour reflects relevant current legislative and regulatory requirements
- maintaining situational awareness at all times
- steering a vessel:
 - in fog and restricted visibility
 - in bad weather
 - in heavy swell and surf
 - in the vicinity of large vessels
 - in wind and sea conditions that may affect the safety of the vessel
 - through coming to and leaving a mooring
 - through towing and being towed.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- effects on the overall operation of the vessel of:
 - displacement and planning hulls
 - outboard and inboard propulsion units
 - rudders and propellers
 - trim and displacement, on the steering characteristics of a vessel
- features of a vessel that relate to its handling characteristics including:
 - effects of single or twin screw
 - effects when moving astern
 - rate of turn
 - stopping ability
 - use of controllable pitch propeller
- relevant WHS/OHS requirements, work practices and pollution control regulation and policies
- steering characteristics of vessel that affect manoeuvrability
- use of magnetic and gyrocompasses as applied to the navigation of a vessel.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

As a minimum, assessment must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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

Steering a vessel under the direction of the Master must occur in workplace operational situations. Where this is not available, in simulated workplace operational situations that replicate workplace conditions.

Resources for assessment include access to:

- an appropriate vessel used to demonstrate steering in normal conditions, adverse weather and emergency situations
- relevant documentation including workplace procedures, regulations, codes of practice and operation manuals
- tools, equipment and personal protective equipment that replicate and are currently used in industry
- navigational equipment including:
 - auto pilot
 - magnetic and gyrocompasses

- manual steering arrangements
- off course alarms
- propulsion equipment including:
 - inboard engine
 - outboard engine.

Links

Companion Volume implementation guides are found in VETNet -

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