



Australian Government

MARN007 Use seamanship skills on board a vessel

Release: 1

MARN007 Use seamanship skills on board a vessel

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to apply practical seamanship skills as part of operations on a vessel.

This unit applies to an Integrated Rating or Able Seafarer-Engine/Deck who assists the responsible officer in a range of seamanship activities 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

N – Seamanship

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Use and maintain ropes and wires

PERFORMANCE CRITERIA

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

- | | |
|-----|---|
| 1.1 | Knots, splices, stoppers, whippings and servings are created and used in the course of operations on board a vessel |
| 1.2 | Ropes are spliced neatly and securely according to their correct application and rope ends are whipped as required to maintain good condition |
| 1.3 | Breaking strain and safe working loads of rope and wire is determined and applied as load limits in the course of |

		operations on board a vessel
	1.4	Wear and damage to rope and wire are identified and recorded
	1.5	Rope and wire are maintained and stored according to organisational procedures
2	Secure vessel at anchor	
	2.1	Anchor and equipment are prepared for use according to organisational procedures
	2.2	Control of cable is maintained within safe operating limits during anchoring operations
	2.3	Anchor and equipment are secured on completion of anchoring operations as instructed for anticipated forecast conditions
	2.4	Anchoring area is kept free of loose ropes, wires and debris during all operations
3	Secure vessel at a berth	
	3.1	Mooring lines and associated equipment are handled safely at all times
	3.2	Mooring area is kept free of loose ropes, wires and debris throughout operations
	3.3	Rope stoppers are correctly applied to transfer mooring lines when securing vessel or tug
	3.4	Securing a tug using tug or ships lines is carried out safely and tug lines are monitored at all times
	3.5	Tension on ropes is maintained at an appropriate level for stage and nature of the operation
	3.6	Tension on shore-power leads and other umbilicals is monitored
4	Lash and secure stores, cargo and access ways	
	4.1	Lashing equipment is inspected, maintained and correctly stored after use according to organisational procedures
	4.2	Cargo is stowed according to recognised principles and organisational procedures relating to transporting and handling dangerous goods
	4.3	Cargo is lashed and secured according to recognised principles and organisational procedures
	4.4	Equipment and items on deck and in galley spaces are

- secured according to organisational procedures
- 4.5 Personnel access ways are rigged and secured according to organisational procedures
- 4.6 Accommodation spaces and personnel facilities on board vessel are checked and correctly secured for sea according to organisational procedures
- 5 Conduct fuelling and oil transfer operations**
- 5.1 Appropriate personal protective equipment is accessed and used
- 5.2 Safety boundary for fuelling and transferring operations is established
- 5.3 Spill prevention systems are correctly deployed
- 5.4 Tank levels are correctly measured and reported pre- and post-fuelling and transferring operations
- 5.5 Fuelling and transferring operations are performed safely, and associated valves and pipelines are secured on completion to avoid spillages
- 5.6 Appropriate action is taken to handle incidents arising during fuelling and transferring operations according to organisational procedures and regulatory requirements
- 5.7 Effective communication is maintained with crew during fuelling and transferring operations to ensure the safety and integrity of the vessel and crew

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.

Anchor and equipment include one or more of the

- anchors and cables
- anchor buoy

following:

- anchor securing arrangements
- anchor windlass
- sea anchor

Lashing equipment
includes one or more of
the following:

- chains
- ropes
- tensioning device
- webbing
- wires

Incidents include one or
more of the following:

- failure of communications systems
- leakage from faulty valves and hoses
- tank overflow

Unit Mapping Information

This unit replaces and is equivalent to MARN3002A Use seamanship skills on board a vessel.

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 MARN007 Use seamanship skills on board a vessel

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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:

- anchoring a vessel in varying weather conditions
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and safe work practices including:
 - chemical and biohazard safety
 - lifting techniques and methods of preventing back injury
- coiling and stowing ropes correctly
- ensuring currency of relevant legislative and regulatory knowledge
- handling ropes and wires safely
- handling, stowing and securing dangerous, hazardous and harmful substances and liquids safely
- identifying and correctly using personal protective equipment
- lashing and securing moveable equipment, especially on deck, in holds and freezers
- measuring and reporting tank levels correctly
- operating anchoring equipment under various conditions such as anchoring, weighing anchor, securing for sea and in emergencies
- performing:
 - eye splice, joining and a short splice in 3 strand hawser laid rope
 - appropriate whippings on ropes and line
 - eye and joining splice in 8 strand multiplait mooring rope
 - eye splice (with locking tuck) in 6 strand flexible steel wire rope
- preparing and throwing a heaving line
- securing a vessel at its berth according to operational requirements
- securing from fuelling and transferring operations
- tying a figure-eight knot, reef knot, bowline, half hitch, clove hitch, round turn and two half hitches, rolling hitch, sheet bend and timber hitch
- using basic crane, winch and hoist signals
- using knots and hitches and securing arrangements.

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:

- basic crane, winch and hoist signals
- capacities, safe working loads and breaking strengths of mooring equipment
- correct application of common knots and hitches
- dangers of working with ropes under tension
- different type of personal protective equipment and their application
- function of mooring and tug lines and how each line functions as part of an overall system
- maintenance of different types of rope, wire and chain
- methods of securing cargo including vehicles, stores and equipment on a vessel before it puts to sea
- preparations for fuelling and transfer operations
- procedures and order of events associated with mooring to a buoy or buoys
- procedures and order of events for making fast and letting go mooring, tug lines and wires
- procedures and precautions for safe handling, stowage and securing of cargo and stores, including dangerous, hazardous and harmful substances and liquids
- procedures for connecting and disconnecting fuelling and transfer hoses
- procedures relating to incidents that may arise during fuelling and transferring operations
- purpose and application of lock out tags
- purpose and application of the Australian Dangerous Goods (ADG) Code or International Maritime Dangerous Goods (IMDG) Code
- purpose of a permit to work and restricted access guidelines
- purpose of safety data sheets (SDSs)/material safety data sheets (MSDSs)
- relevant WHS/OHS requirements, work practices and pollution control regulation and policies
- safe working practices, procedures and personal shipboard safety when working aloft
- safe working practices, procedures and personal shipboard safety when working over the side
- types of anchors, principles, method of operation and use in various conditions.

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.

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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.

Assessment of seamanship skills 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:

- relevant documentation including workplace procedures, regulations, codes of practice and operation manuals
- tools, materials and personal protective equipment that replicate and are currently used in industry
- deck equipment and machinery including:
 - bow and stern cargo doors
 - cam lock fittings
 - fast rescue craft davits/workboat davit
 - gangways
 - hatches and hatch covers
 - helidecks
 - hoists
 - pilot ladders
 - rollers
 - rat-guards
 - side doors
 - shark jaws
 - tow pins
- mooring lines and associated equipment including:
 - bitts
 - bollards
 - capstan
 - chocks
 - mooring wires
 - multiplait mooring lines
 - synthetic and fibre lines
 - tug lines and wires
 - winches
 - windlass.

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