



Australian Government

MARC4004A Operate deck machinery and steering gear on a vessel up to 80 metres

Release 1

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Modification History

Release 1

This is the first release of this unit.

Unit Descriptor

This unit involves the skills and knowledge required to operate steering gear and deck machinery on a vessel up to 80 metres.

Application of the Unit

This unit applies to working in the capacity of Master on a range of vessels up to 80 metres.

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

- 1 Prepare for operation**
 - 1.1 Routine pre-operational checks of *steering gear or deck machinery* are completed prior to use according to manufacturer specifications and organisational procedures
 - 1.2 Equipment is set up
 - 1.3 *Tools and equipment* appropriate to work requirements are selected, checked for safety and set up for operation
 - 1.4 Equipment faults or malfunctions are identified and reported according to organisational procedures
 - 1.5 Work health and safety (WHS)/occupational health and safety (OHS) hazards in the work area are identified, and risks are assessed and reported according to organisational procedures
- 2 Operate steering gear and deck machinery**
 - 2.1 Suitable personal protective equipment is selected and used according to organisational procedures
 - 2.2 Steering gear and deck machinery are operated in a safe and controlled manner
 - 2.3 Performance and efficiency of steering gear and deck machinery operations is monitored
 - 2.4 Safe operational practices are used to anticipate and control hazards
 - 2.5 Adverse sea and weather conditions which may impact on the operation of steering gear and deck machinery are identified and operational practices are adjusted to maintain safety of vessel and personnel
- 3 Complete operations**
 - 3.1 Shut-down procedures are conducted according to manufacturer instructions and organisational procedures
 - 3.2 Malfunctions, faults, irregular performance or damage to steering gear and deck machinery are reported according to organisational procedures
 - 3.3 Steering gear and deck machinery is cleaned and secured according to organisational procedures
 - 3.4 Operational records are completed according to organisational procedures

Required Skills and Knowledge

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

Required Skills:

- Complete required records relating to the operation of steering gear and deck machinery
- Follow work schedules laid down in organisational instructions and safety management systems
- Initiate and operate emergency steering systems
- Read, interpret and apply instructions on the operation of steering gear and deck machinery
- Recognise faulty equipment and take appropriate action
- Recognise routine hazards and problems while operating steering gear and deck machinery
- Select and use relevant tools and equipment
- Work safely and collaboratively with others when operating and maintaining deck machinery and steering gear

Required Knowledge:

- Basic principles of hydraulics
- Communication techniques and signals needed during the operation of steering gear and deck machinery on vessels up to 80 metres
- Principal features and operating characteristics of steering gear and deck machinery used on vessels up to 80 metres
- Problems related to the operation of steering gear and deck machinery and appropriate actions and solutions
- Procedures for checking and inspecting steering gear and deck machinery used on vessels up to 80 metres
- Procedures for the safe operation of steering gear and deck machinery
- Procedures for, and operation of, emergency steering systems
- Records that must be maintained on a vessel up to 80 metres
- Relevant state and territory maritime WHS/OHS and pollution control regulations and policies
- Safety, environmental and hazard control precautions and procedures relevant to the operation of steering gear and deck machinery

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:

- communicating effectively with others
- providing the required amount of detail in reports
- attention to appropriate level of detail in recordkeeping.

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 operating steering gear and deck machinery on a vessel up to 80 metres may 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 operating steering gear and deck machinery on a vessel up to 80 metres
- direct observation of the candidate applying relevant WHS/OHS requirements and work practices.

Guidance information for

Holistic assessment with other units relevant to the industry

assessment

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.

Steering gear or deck machinery may include:

- Basic hydraulic systems
- Cranes
- Emergency steering gear
- Fishing gear
- Steering gear
- Winches and capstans
- Windlass

Tools and equipment may include:

- Greasing and lubrication tools
- Hand and power tools, including screwdrivers, drills, grinders, spanners, wrenches, wire cutters
- Protective clothing and equipment

Unit Sector(s)

Not applicable.

Competency Field

Equipment Operations