NSW MARITIME AUTHORITY

The following pages contain the competencies listed in Annex B of Part D of the National Standard for Commercial Vessels.

These competencies form the basis of the orals examinations conducted by NSW Maritime. Reference should also be made to the competencies listed in the Maritime Industry Training Package Units of Competency and the NSW Record of Service (RoS) Book.

TABLE B1.1 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS COXSWAIN
Function: Operational Section 1: Nautical Knowledge—Coxswain

Outcome	Content	Standards for evaluating competence
Manoeuvre a vessel	**Vessel Handling and Manoeuvring** • Displacement and planing hulls • Outboard and inboard propulsion units • Effects of rudders and propellers • Manoeuvring characteristics • Berthing and unberthing in various wind and tidal conditions • Manoeuvres in adverse weather conditions • Manoeuvres to beach and cross coastal bars • Towing and being towed • Trim and Displacement • Anchoring	Explain the features of a vessel, which relate to its handling characteristics. Explanations are in compliance with current maritime publications or accepted procedures. Manoeuvre the vessel through: • Berthing and leaving a berth • Berth in a pen • Man overboard • Coming to and leaving a mooring • Steering astern through a “s” configuration • Turn short around • Towing and be towed • Beached and refloated safely • Turn a vessel across the tide across the wind This should be combined with the manoeuvring required in the outcome “Use navigational techniques to conduct a safe passage” in this table. Explain the techniques for crossing a coastal bar with and against the sea.
Respond to emergency situations	**Emergency and Safety Procedures** • Knowledge of the stability of a small vessel and stability terms • Disabled vessel • Collision, grounding • Man overboard • Heavy weather • Beaching • Cyclone activity in the area	Respond to emergencies in accordance with vessel procedures and maritime practices. Explanations are in compliance with current maritime publications and procedures and are relative to a 12m vessel.
Collect and assess weather forecasts	**Meteorology** • Basic meteorological terms • Sources of weather reports and warnings • Local weather • Cyclonic development	Obtain weather information applicable to an intended voyage. Apply weather information during voyage planning and explain expected weather patterns. Utilise information for navigation. Relate information in forecasts to conditions expected for small vessels.

(Continued…)

TABLE B1.1 — Function: Operational Section 1: Nautical Knowledge—Coxswain *(cont.)*

Outcome	Content	Standards for evaluating competence
Apply seamanship skills and techniques.	**Practical Seamanship** • Rope types • Common knots, hitches, splices • Towing arrangements • Anchors • Anchoring methods • Use of sea anchors	Identify rope types and common areas of use. Identify, explain the use and tie the following knots; reef knot, bowline, sheet bend, clove hitch, round turn and 2 half hitches. Eye Splice a fibre/synthetic rope end and join two ends complying with the rope manufacturer's recommendations. Whip an end. Rig a vessel for towing and to be towed according to established procedures for varying weather conditions. Prepare and anchor a vessel in varying weather conditions. Weigh anchor and proceed in those same conditions. Rig a sea anchor to control a specified rate and direction of drift and or angle to sea. Use a sea anchor for emergency steering and to prevent broaching.
Use navigational information and techniques to conduct a safe passage	**Navigation & Local Knowledge** • Chart information (symbols and abbreviations) • Coastal features • Dangers to navigation • Compass • Basic pilotage techniques • Speed, distance and time calculations • Use of local tide tables • Electronic aids and their limitations	The vessel is navigated through a pre-planned route with the requirement to: a) Specify fuel consumption and time at turning points. b) Identify courses to steer between turning points. c) Identify and comply with all navigational buoys, marks and beacons. d) Identify navigational hazards. e) Plot a position on a chart by use of visual bearings. f) Plot the position derived from GPS and explain dangers of reliance on use of GPS in coastal areas. g) Plot visual bearings on a chart to derive a position. h) Steer a pre-planned course. i) Apply the International Regulations for the Prevention of Collision at Sea (as amended). j) Identify the times and heights of high and low water from local tide tables. k) Explain the impact of tidal variation on chart depths.

(Continued…)

TABLE B1.1 — Function: OperationalSection 1: Nautical Knowledge—Coxswain *(cont.)*

Outcome	Content	Standards for evaluating competence
Apply regulations pertaining to the safe operation of a small vessel	**Regulations & Port Operations** • International Regulations for the Prevention of Collision at Sea (as amended) • Lights, shapes and sounds • Distress signals • Large commercial traffic • IALA Buoyage System 'A' • State and Territory legislation • Duties and responsibilities • Assisting in distress • Lifesaving and fire-fighting appliances • Pollution prevention	Identify and implement current State /Territory regulations. Apply the duties and responsibility of the Master as per STCW-95. Watchkeeping behaviour complies with STCW-95. Apply the International Regulations for the Prevention of Collision at Sea (as amended).

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

Vessel manoeuvring should be assessed in varying tide/current and weather conditions.

Throughout practical, attention is paid to trim displacement wind and tide, weather and their impact on handling. Student to explain practical implications of strong conditions on handling and how they would approach the situation under those conditions

TABLE B1.2 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS COXSWAIN
Function: Operational Section 2: Engineering—Coxswain

Outcome	Content	Standards for evaluating competence
Identify and explain the structural components and material of a small vessel	**Structure of Vessels** • Basic structural components	Identify deteriorated hull and fittings and explain the reason for the deterioration.
Operate propulsion machinery and ancillary equipment	**Engineering** • Basic operating principles of two and four stroke engines • Petrol, diesel and outboard engines • Drive train assembly • Steering gear • Ancillary equipment • Cooling, lubricating and fuel systems • Bilge and fire pumping arrangements • Monitoring machinery • Machinery malfunction • Electrical systems (12 volts – 240 volts) • LPG • Refuelling • Shore power connection – an awareness of hazards	The operating principles are described in accordance with manufacturer's manuals and the equipment is operated in accordance with maker's specification or predetermined vessel procedures. Operate machinery according to vessel or manufacturers procedures. Operate pumping and auxiliary equipment according to vessel or manufacturers procedures to ensure that the vessel is kept in a safe condition. Maintain equipment and pumps according to vessel and/or manufacturers user level maintenance requirements. Safety precautions and pollution prevention measures during refuelling are applied according to legislative requirements, provider's requirements and vessel operating procedures.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

Table B2.1 — Competencies for a Certificate of Competency as Master Class 5/Skipper Grade 3
Function: Operational—Management
Section 1: Ships Construction—Master Class 5/Skipper Grade 3

Outcome	Content	Standards for evaluating competence
Identify and explain the functions of the principal structural components of a small vessel	**Design & Construction** • Principle parts of a vessel • Basic methods of design • Construction material (Steel, Aluminium, FRP & Wood) • Regulations governing structure	Identify structural components from ship's drawings and plans, locate on a vessel and ascertain the relevant regulation governing the structure. Explain the function of structural components in compliance with conventional maritime design. Identify samples of construction material
Maintain the watertight integrity of a vessel	**Watertight Integrity** • Watertight and weathertight integrity • Design characteristics preserving water tight integrity • Maintenance to sustain watertight integrity • Regulations affecting watertight integrity	Identify watertight features and structural components from ship's drawings and plans and be able to locate them on a vessel. Explain the function of watertight features and structural components in compliance with conventional maritime design. Identify deteriorated hull and fittings and explain the reason for the deterioration, in accordance with maritime engineering procedures. Examine a vessel and detail the maintenance procedures required to test and to ensure watertight integrity in compliance with maritime engineering and inspection procedures. List regulations effecting watertight integrity. Identify the dangers of working in confined spaces and list precautions and procedures for doing so in compliance with Australian Standards and OH&S.
Operate the fuel, fresh and ballast water, bilge and fire pumping systems installed in a vessel	**Pumping Arrangements** • Fuel, fresh and ballast water, bilge and fire pumping arrangements • Sounding and venting facilities • Safety features incorporated in systems • Maintenance requirements to ensure operational readiness • Regulated requirements • Refuelling	Identify pumping systems on vessel drawings and identify and trace them on board the vessel. Operate pumping equipment to comply with manufacturer's specification. Identify procedures to avoid contamination of fuel or drinking water, keep bilges clean and dry and provide fire fighting whilst maintaining stability of the vessel and without environmental contamination. Maintain and test pumping equipment according to manufacturers, vessel, or regulatory specifications. Safety precautions and pollution prevention measures during refuelling are applied according to legislative requirements, provider's requirements and vessel operating procedures.

(Continued…)

Table B2.1 — Function: Operational—Management
Section 1: Ships Construction—Master Class 5/Skipper Grade 3 *(continued)*

Outcome	Content	Standards for evaluating competence
Use and maintain deck machinery installed on a vessel	**Deck Machinery** • Mechanical deck equipment • Safety features incorporated in systems • Maintenance requirements to ensure operational readiness • Precautions to be observed when using deck machinery • Regulated requirements	Operating procedures are in accordance with makers specification &/or vessel operating procedures. Regulatory requirements are applied. Maintenance procedures comply with manufacture's requirements. Safety procedures and precautions followed are in accordance with OH&S and maritime safety regulations.
Operate steering gear arrangements	**Steering Systems** • Steering gear arrangements • Safety features incorporated in systems • Maintenance requirements to ensure operational readiness • Regulated requirements	Operating procedures are in accordance with makers specification &/or vessel operating procedures. Regulatory requirements are applied. Maintenance procedures comply with manufacture's requirements. Safety procedures and precautions followed are in accordance with OH&S and maritime safety regulations.
Manage hull deterioration	**Vessel Maintenance** • Characteristics and causes of deterioration • Methods to minimise and remedy deterioration • Maintenance management	Deteriorated hull and fittings are identified in accordance with maritime engineering examination procedures. Regulatory requirements are applied. Maintenance procedures and safety precautions comply with manufactures recommendations and warnings. Maintenance schedule is (as minimum) as per maker's requirements.
Describe the various methods of slipping a vessel	**Slipping** • Procedures for slipping a vessel. That an industry visit incorporates the witnessing of a vessel being slipped • Safety precautions (ship and personnel) on board a vessel whilst out of the water • Maintenance to ensure operational readiness. • Working in confined spaces • Regulated requirements	Explain slipping procedures as per vessel and engineering practices. Deteriorated underwater fittings are identified. Workplace Health and Safety procedures are observed. Regulatory requirements are interpreted correctly. Maintenance procedures comply with manufacturer's requirements. Safety precautions and procedures described comply with vessel procedures. The precautions for putting a boat back in the water conform to marine safety regulations and engineering principles.

(Continued…)

Table B2.1 — Function: Operational—Management
Section 1: Ships Construction—Master Class 5/Skipper Grade 3 *(continued)*

Methods and conditions for demonstrating competence (To be applied to all outcomes in this table)
Assessment by an accredited assessor in a— • working vessel; • training vessel; • simulator; or • approved training facility. Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions. The process can be a part of— • employment; • an approved training program; or • recognition of prior learning.

TABLE B2.2 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS MASTER CLASS 5/SKIPPER GRADE 3
Function: Operational—Management
Section 2: Stability—Master Class 5/Skipper Grade 3

Outcome	Content	Standards for evaluating competence
Use simplified stability information to maintain the stability of a vessel	**Stability** • Principles of stability • Terms and definitions • Basic physics of stability • Equilibrium • Impact of design and hull shape on stability Note: Stability to be considered without calculation **Operating Conditions** • Adding and removing weights • Water on deck • Slack tanks • Roll period • Stiff and tender vessel • Additions and alterations to vessels	Information obtained from a vessel's simplified stability data book is applied to maintain the stability of a vessel. Explanations, including diagrams, of principles and content, comply with vessel simplified stability book. Explanations on how to improve stability for heavy weather considerations.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B2.3 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS MASTER CLASS 5/SKIPPER GRADE 3
Function: Operational – Management
Section 3: Coastal Navigation — Master Class 5/Skipper Grade 3

Outcome	Content	Standards for evaluating competence
Plan and conduct a safe passage and determine position	**Chart & Features** • Construction of a navigational chart • Latitude and longitude • Relationship between latitude and longitude • Variation and deviation • Chart scales • Information displayed on a chart or plan • Notice to Mariners	The information obtained from navigational charts is relevant and applied. That chart symbols and features are identified or selected. That chart corrections, as per Notice to Mariners, are correctly inserted, and deleted as necessary.
	Coastal Navigation Techniques • Relationships between true, magnetic, compass, gyro and relative • Variation and deviation • Deviation card • Compass error • Laying off a safe course • Position determination by visual, estimated and radar means • Position estimation by dead reckoning • Coastal features • Publications for safe navigation • Electronic fixing aids • Reporting systems	The information obtained from current navigational charts and publications is relevant and applied. All navigational hazards are identified. Estimated positions are calculated accurately on known data. The vessel position is fixed using visual, radar and a combination of visual and radar information. Vessel position must be accurate. Plot a GPS derived position. The positions obtained are within acceptable accuracy levels. The fixing interval is appropriate to the proximity of danger. Calculations and measurements from the chart are accurate. The charts selected are appropriate to the area of operation.
	Instrumentation & Navigation Aids Basic principles, errors and limitations of: • Compasses • Echo sounders • GPS • Automatic steering systems • Alarm systems • Plotters and electronic charts.	Performance checks and tests on navigational equipment and systems are carried out adhering to manufacturer's recommendations and satisfactory navigational practices. Operating procedures used are in accordance with manufacturer's recommendations. Explanations are provided detailing performance limitations of equipment.

(Continued…)

TABLE B2.3—Function: Operational – Management
Section 3: Coastal Navigation — Master Class 5/Skipper Grade 3 *(continued)*

Outcome	Content	Standards for evaluating competence
Plan and conduct a safe passage and determine position *(continued)*	**Tides** • Basic tidal theory • Tidal prediction sources • Tide tables, Australian and local	The information obtained from tide tables navigational charts, publications is relevant and applied. The times and heights of high and low water from Australian or local tide tables for any port are accurate. The relevance of chart datum to the height of tide is explained by practical example. The publications used are current.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B2.4 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS MASTER CLASS 5/SKIPPER GRADE 3
Function: Operational Management
Section 4: Radar — Master Class 5/Skipper Grade 3

Outcome	Content	Standards for evaluating competence
Use radar to maintain safety of navigation and for collision avoidance	**Fundamental Principles** • Fundamental principles and their effects on performance. • Pulse transmission • Pulse length • Wave length and frequency • Range and bearing measurement • Major components and their siting	Components are identified as per manufacturer's specification. The effect of the fundamental principles and characteristics on performance of the radar is explained and compensated for during use.
	Characteristics & Performance • Factors affecting performance • Maximum and minimum range • Bearing and range accuracy • Vertical and horizontal beam width • Range and bearing discrimination • Radar horizon	The effect of the factors affecting performance are explained and recognised during use.
	Interpretation of Display • Effects of target aspects • Shore and topography targets • Atmospherics • Weather factors • Blind arcs and shadow areas • False echoes • Radar reflectors • Radar beacons and transponder beacons • Radar logs	Limitation and operating parameters of the radar are identified. Information obtained from radar is interpreted and analysed to assist in navigation and collision avoidance. Interpretation and analysis to be confirmed by alternative means. Detect misrepresented information. Limitations and accuracy of equipment and information derived in prevailing conditions are identified.
	Functions and Adjustment • Function of controls • Symbols for controls • Setting up and maintain display • Shutting down display • Maladjustments • Verification of range and bearing	The procedures adopted to operate a radar set comply with manufacturer's recommendations. That controls are identified and adjusted to provide maximum performance according to makers specifications.

(Continued…)

TABLE B2.4—Function: Operational Management
Section 4: Radar — Master Class 5/Skipper Grade 3 *(continued)*

Outcome	Content	Standards for evaluating competence
Use radar to maintain safety of navigation and for collision avoidance *(continued)*	**Plotting & Collision Avoidance** • Relative motion • Radar presentations • Radar plotting • Collision avoidance • International Regulations for the Prevention of Collision at Sea (as amended) • Reporting • Parallel indexing	Action taken to avoid a close quarters situation or collision with another vessel is in accordance with the International Regulations for the Prevention of Collision at Sea (as amended). That plots to ascertain targets closest point of approach and time of closest point of approach are actioned to prevent “close quarter" situations developing. Manoeuvring and restricted visibility signals are in accordance with the International Regulations for the Prevention of Collision at Sea (as amended) and used correctly. Course and speed alterations prevent close quarter situations, comply with International Regulations for Prevention of Collision at Sea (as amended) and avoid navigational hazards.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B2.5 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS MASTER CLASS 5/SKIPPER GRADE 3
Function: Operational—Management
Section 5: Nautical Knowledge—Master Class 5/Skipper Grade 3

Outcome	Content	Standards for evaluating competence
Use Commonwealth and State & Territory Acts, Legislation, Codes and other publications relevant to the safe operation of a vessel	**Marine Legislation** • Duties and responsibilities • Certificates on board a small vessel. • Procedures manuals on board a small vessel • Operational areas and classification of vessels • NSCV Part C Section 7 • Contents of Marine Notices, Annual Notices to Mariners • Log Book or Vessel Record Book • Workplace Health and Safety Legislation • Marine Pollution • State & Territory Marine Legislation • Certificates to be carried on board	Information obtained from Commonwealth State & Territory Acts, Legislation, Codes and other publications relating to the safe navigation of a vessel is current, and applied. The duties and responsibilities of the Master are identified.
Obtain and interpret meteorology information relevant to a voyage	**Meteorology** • Elements of meteorology • Terms and definitions • Weather systems • Pressure systems and circulation • Sources of weather forecasts and information • Synoptic charts • Instruments for on board observations • Tropical revolving storms (TRS)	Weather information obtained is applicable to the intended voyage. Information obtained from observations, reports and instruments is analysed and included in the voyage planning. Actions taken by a small vessel to avoid severe weather are identified.
Maintain a safe navigation watch	**Watchkeeping** • Content, application and intent of the International Regulations for the Prevention of Collision at Sea (as amended) • Watchkeeping standards and principles at sea, anchor and in port • Bridge communication • IALA buoyage system 'A'	International Regulations for the Prevention of Collision at Sea (as amended) are interpreted and applied. Watchkeeping behaviour complies with accepted standards and procedures. Communication and reporting procedures adopted in the wheelhouse are defined. The vessel log/record book is maintained in accordance with the NSCV.

(Continued…)

TABLE B2.5 — Function: Operational—Management
Section 5: Nautical Knowledge—Master Class 5/Skipper Grade 3 *(continued)*

Outcome	Content	Standards for evaluating competence
Respond to emergency situations	**Emergency Procedures** • Collision, grounding, damage to the vessel • Protection and safety of all persons on board • Abandoning the vessel • Rescuing persons in distress • Assisting a vessel or aircraft in distress • Assisting a vessel or aircraft in SAR • Musters and Drills • Tropical Revolving Storms	The emergency situations are identified expeditiously. Procedures are appropriate and comply with NSCV Part E and current practices.
Explain the various features of a vessel, which relate to its handling characteristics Manoeuvre a vessel	**Vessel Handling and Manoeuvring** • Effects of rudders and propellers • Berthing and unberthing in various conditions • Manoeuvres to approach an anchorage • Effects of narrow channels and shallow water on manoeuvring • Effects of interaction • Management of a vessel in heavy weather (May not be possible in training) • Crossing a bar (May not be possible in training) • Manoeuvres to launch boats or liferafts • Manoeuvres and procedures for man overboard	Handling characteristics of a vessel are described and the significance of the characteristic relative to manoeuvring is explained in accordance with engineering and design principles. Vessel is manoeuvred as indicated in contents column within its performance parameters. Launch and retrieve life raft/boat according to vessel procedures. Vessel is manoeuvred to pick up simulated man over board using internationally recognised practices. Turn a vessel across the tide across the wind. Williamson turn, turning short around.

(Continued…)

TABLE B2.5 — Function: Operational—Management
Section 5: Nautical Knowledge—Master Class 5/Skipper Grade 3 *(continued)*

Outcome	Content	Standards for evaluating competence
Demonstrate seamanship skills and techniques.	**Practical Seamanship** • Knots, hitches and bends using fibre and synthetic rope • Eye splice and short splice in fibre and synthetic rope • Precautions when using rope, wire and chains • Breaking strain and safe working loads of ropes • Maintenance and care of rope, wire and chain • Rigging gear and maximum loads • Winches and windlasses • Safe handling of moorings and hawsers • Stowing and securing anchors for sea • Securing for rough weather and maintenance of watertight integrity • Lashing and securing equipment • Towing and being towed	Workplace health and safety procedures are observed. Identify rope types and common areas of use. Identify, explain the use and tie the following knots; reef knot, bowline, sheet bend, clove hitch, round turn and 2 half hitches. Eye Splice a fibre/synthetic rope end and join two ends complying with the rope manufacturer's recommendations. Whip an end. Techniques and skills used to perform tasks are in accordance with manufacturers specifications and industry standards. That maintenance procedures comply with authorised requirements.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B4.1 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MATE CLASS 4, MASTER CLASS 4 OR SKIPPER GRADE 2
Function: Management and Operational Control
Section 1: Vessel Construction & Machinery — Mate Class 4, Master Class 4 or Skipper Grade 2

Outcome	Content	Standards for evaluating competence
Identify and explain the principal structural components of a vessel of 80 metres in length	**Vessel Construction** • Fundamental principles of vessel construction • Principal structural components • Load lines conditions of assignment • Structural arrangements to restrain fires • Design characteristics attributing to watertight integrity • Methods for testing tanks and watertight integrity • Regulatory requisites	Identify structural components from ship's drawings and plans and locate on a vessel. Explain the function of structural components in compliance with conventional maritime design. Identify samples of construction material.
Manage a propulsion unit using the appropriate engineering systems and support services	**Engineering Systems** • Marine engineering terms • Management of marine power units • Ancillary equipment • Safety alarm systems	Operation of propulsion unit, ancillary power units and equipment is in accordance with technical specifications. Machinery is operated within the accepted safety parameters. Monitoring of safety and fire detection systems is in accordance with formulated emergency procedures. Operation of safety and fire detection/suppression systems. Adopted safety precautions and procedures are appropriate.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B4.2 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MATE CLASS 4, MASTER CLASS 4 OR SKIPPER GRADE 2
Function: Management and Operational Control
Section 2: Stability & Stress Conditions — Mate Class 4, Master Class 4 or Skipper Grade 2

Outcome	Content	Standards for evaluating competence
Manage stress and dynamic factors affecting a vessel's stability	**Stability** • Terms and definitions • Forces and moments • Centroids and centre of gravity • Density and specific gravity • Dockwater allowance • Transverse and longitudinal dynamics • Effects of free surface of liquids • Loading and discharging weights • Final KG • Bilging and permeability • Change of draft and trim (MTC) • Tonnes per centimetre immersion (TPC) • Fresh water allowance • Virtual loss of GM • Stress conditions • Stability curves	Information obtained from a vessel's simplified stability data book is interpreted correctly. Calculations associated with basic stability management are accurate. Correlate and interpret calculated stability data. Stability and stress conditions are managed within safety parameters. The information communicated is relevant and correct. Illustrations are accurate.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B4.3—COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MATE CLASS 4, MASTER CLASS 4 OR SKIPPER GRADE 2
Function: Management and Operational Control
Section 3: Navigation Mate Class 4, Master Class 4 or Skipper Grade 2

Outcome	Content	Standards for evaluating competence
Plan and conduct a safe passage	**Voyage Planning** • Chart catalogue • Plotting ocean tracks • Fuel consumption • Meteorological conditions & restrictions imposed by various authorities • Principles of ships routing • Ship reporting systems • Admiralty publications	The information obtained from navigational charts is relevant and applied. Facts and statistical data are obtained from relevant sources and current publications. Determined position, courses, distances and time are accurate. All navigational hazards are identified. Planned passage and information is transferred to charts. During passage position information gained is applied and the plan adjusted.
	Tides • Tidal theory • Tide tables - Australian and Admiralty	The information obtained from tide tables navigational charts, publications is relevant and applied. The calculated times for a height of tide at standard and secondary ports are accurate. The state of tide at any time is accurate for standard and secondary ports. The publications used are current.
Use various fixing techniques to determine a vessel's position in any condition	**Position Determination Techniques** • Terrestrial observations • Azimuth and amplitude • Nautical publications • Radio or electronic aids to navigation • Gyro and magnetic compasses • Electronic navigation aids	The information obtained from current navigational charts and publications is relevant and applied. Techniques used to determine the vessel's position are justified relative to the prevailing conditions. Positions obtained from terrestrial bodies are within accepted limits. The accuracy of fixes is verified. Positions determined by electronic aids are within acceptable limits. Performance checks and tests on navigational equipment and systems are carried out adhering to manufacturer's recommendations and maritime navigational practices.

(Continued…)

TABLE B4.3 — Function: Management and Operational Control
Section 3: Navigation Mate Class 4, Master Class 4 or Skipper Grade 2 *(continued)*

Methods and conditions for demonstrating competence (To be applied to all outcomes in this table)
Assessment by an accredited assessor in a— • working vessel; • training vessel; • simulator; or • approved training facility. Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions. The process can be a part of— • employment; • an approved training program; or • recognition of prior learning.

TABLE B4.4 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MATE CLASS 4, MASTER CLASS 4 OR SKIPPER GRADE 2
Function: Management and Operational Control
Section 4: Radar Operator — Mate Class 4, Master Class 4 or Skipper Grade 2

Outcome	Content	Standards for evaluating competence
Use radar and ARPA to maintain safety of navigation and collision avoidance	**Fundamental Principles** • Fundamental principles • Pulse transmission • Pulse length • Wave length and frequency • Range and bearing measurement • Major components and their siting • Radiation hazards	Information obtained from manufacturer's specifications is applied. That radar components are identified according to manufacturer's manuals. Diagrams and explanations conform to maker's manuals.
	Characteristics & Performance • Factors affecting performance • Maximum and minimum range • Bearing and range accuracy • Vertical and horizontal beam width • Range and bearing discrimination • Radar horizon • Marine radar performance standards	Information obtained from manufacturer's specifications is interpreted correctly. Performance standards are identified and applied. Illustrations and explanations are clear and concise and conform to manufacturer's instruction manuals.
	Functions and Adjustment • Function of controls • Symbols for controls • ARPA controls • ARPA setting-up procedure • Setting up and maintain display • Shutting down display • Maladjustments • Verification of range and bearing	The procedures adopted to operate a radar set or ARPA comply with manufacturer's recommendations. Controls are identified and adjusted as per the manufacturer's manual. Demonstrate the ability to operate tuning and clutter controls in differing and atmospheric weather conditions.
	Interpretation • Effects of target aspects • Shore and topography targets • Atmospherics • Weather factors • Blind arcs and shadow areas • False echoes • Radar for navigation • Radar frequency bands • Radar logs	Information obtained from radar and ARPA is correctly interpreted and analysed, taking into account the limitations of the equipment and prevailing circumstances and conditions and actioned in accordance with International Regulations for the Prevention of Collision at Sea (as amended). Detect misrepresented information.

(Continued…)

TABLE B4.4 — Function: Management and Operational Control
Section 4: Radar Operator — Mate Class 4, Master Class 4 or Skipper Grade 2 *(cont.)*

Outcome	Content	Standards for evaluating competence
Use of radar to maintain safety of navigation and collision avoidance *(continued)*	**Plotting & Collision Avoidance** • Relative and true motion • Radar presentations • ARPA • Radar plotting • Blind pilotage techniques • Alterations by own ship • Alterations by target ship • Passing a given distance • Course and speed to close target • Collision avoidance • Collision Regulations • Communications VHF • Reporting	Information obtained from radar and ARPA is correctly interpreted and analysed, taking into account the limitations of the equipment and prevailing circumstances and conditions and actioned in accordance with International Regulations for the Prevention of Collision at Sea (as amended). Action taken to avoid a close quarters situation or collision with another vessel is in accordance with the International Regulations for Prevention of Collision at Sea (as amended). Manoeuvring signals are made at the appropriate time and are in accordance with the International Regulations for the Prevention of Collision at Sea (as amended). Decisions to adjust course and or speed are justified as timely and effective having regard for safe navigation. Communication is acknowledged and achieves the intended result. Radar plots are clear, concise and calculated correctly.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B4.5 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MATE CLASS 4, MASTER CLASS 4 OR SKIPPER GRADE 2
Function: Management and Operational Control
Section 5: Nautical Knowledge — Mate Class 4, Master Class 4 or Skipper Grade 2

Outcome	Content	Standards for evaluating competence
Monitor and control compliance with legislative requirements	**Marine Legislation** • Commonwealth, State & Territory Acts and subordinate legislation • NSCV • MERSAR • MARPOL 73/78 • STCW 95 Code • SOLAS	Information obtained from International, Commonwealth and State & Territory Acts, Legislation, Codes and other publications relating to the safe navigation and operation of a vessel is current and applied. Procedures for monitoring ships operations and maintenance comply with legislative requirements. The responsibilities under international maritime law embodied in international agreements and conventions are clearly identified, interpreted and applied. Procedures and communications used for co-ordinating SAR operations are in accordance with IMO requirements.
Predict meteorological and oceanographic conditions	**Meteorology & Oceanography** • Vertical division of atmosphere • Heat exchange process • Cloud classification • Air masses and fronts • Synoptic chart analysis • Tropical meteorology • Instruments • Ocean currents • Sea state	Weather forecasts for an intended voyage are made using all available data and the forecast is justified. Information obtained from observations, reports and instruments is deciphered and applied to ensure safety of the vessel.
Execute appropriate watchkeeping arrangements and procedures	**Watchkeeping** • Content, application and intent of the International Regulations for the Prevention of Collision at Sea (as amended). • Watchkeeping principles • Bridge teamwork procedures	Watchkeeping arrangements and behaviour comply with STCW-95, Marine Orders and Regulations. The International Regulations for the Prevention of Collision at Sea (as amended) are appropriately applied. Communication and reporting procedures adopted on the bridge are clearly defined and accepted. Adopted procedures enhance navigational safety, protection of the marine environment and the safety of all on board.

(Continued…)

TABLE B4.5 — Function: Management and Operational Control Section 5: Nautical Knowledge — Mate Class 4, Master Class 4 or Skipper Grade 2 *(continued)*

Outcome	Content	Standards for evaluating competence
Manoeuvre a vessel in any prevailing conditions	**Vessel Handling and Manoeuvring** • Interaction • Propulsion and manoeuvring systems • Manoeuvring in restricted waters • Embarkation and disembarkation of pilots • Anchoring and manoeuvres to approach an anchorage • Management of vessel in heavy weather • Manoeuvres to launch boats or liferafts • Methods for retrieving survivors • Vessels stopping distance and rate of turn • Berthing manoeuvres • Traffic separation schemes • Emergency heavy weather management procedures	Decisions made are justified with consideration to the vessels manoeuvring and propulsion unit's characteristics in the prevailing conditions. In analysing the safe manoeuvring of a vessel, explanation is given to; interaction, tide, current, passing vessels and own vessels bow and stern wave. Initial responses are concise and appropriate measures taken are adequate. Safe operating limits are not exceeded. Safety precautions followed are relevant. Turn a vessel across the tide across the wind. Williamson turn, turn short around.
Respond to navigational emergencies	**Emergency Procedures** • Beaching a vessel • Grounding and refloating a vessel • Collision • Damage control • Emergency steering • Emergency towing arrangements and procedures • Salvage arrangements • Musters and drills • Cyclones and heavy weather	Contingency plans are formulated and adopted for emergency situations in content column. Initial actions and, if appropriate, Manoeuvring of the ship are in accordance with contingency plans without risk to the vessel or crew safety. Follow-up actions are justified in accordance with Marine Safety procedures. Equipment utilised is appropriate and safe. That communication and reporting procedures adopted are clearly defined and accepted. Safety precautions followed are relevant. That OH&S considerations are emphasised.
Prepare a cargo plan to ensure safe cargo operations whilst loading, unloading and during a voyage	**Cargo Operations** • Purchases and tackle • Stresses and loads • Safe working loads • Cargo handling and securing equipment • IMDG Code • Bulk Cargo Code • Cargo stowage and securing • Loading and unloading • Ballasting • Documentation • Authorities requisites	Information, procedures and documentation relating to the handling of dangerous and harmful cargo are reliable and correctly identified in accordance with the International Maritime Dangerous Goods Code and with awareness of Marine Safety data sheets. Cargo operations and the distribution of cargo are planned using reliable information and in accordance with established guidelines. Emergency procedures for incidents involving dangerous and hazardous cargoes are appropriate. Cargo monitoring procedures are appropriate. Safety precautions and procedures described comply with maritime procedures and OH&S requirements.

(Continued…)

TABLE B4.5 — Function: Management and Operational Control Section 5: Nautical Knowledge — Mate Class 4, Master Class 4 or Skipper Grade 2 *(continued)*

Outcome	Content	Standards for evaluating competence
Establish and maintain a harmonious workplace environment	**Organisation & Management** • Management and leadership • Leadership style • Group dynamics • Conflict resolution • Organisation skills	Individual crewmembers are informed of the expected standards of work and behaviour and allocated appropriate duties. Crew training objectives and activities are based on an assessment of current competence and operational requirements. Initial indications and possible causes of conflict are promptly identified. Propose appropriate strategies to deal with conflict within the workplace. Communication skills used facilitate constructive response to conflict.
Organise and manage communications on board to receive information and advice	**Communications** • International code flags and usage of signal books • International Code of Signals • GMDSS system • Radio • MERSAR	Information obtained from International Code of Signals and other publications relating to inter-ship communications is current and actioned. Procedures for monitoring ships communication systems comply with legislative requirements. Communication procedures ensure that marine safety information and inter-ship safety messages are received and acknowledged.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B5.1 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MASTER CLASS 3 OR SKIPPER GRADE 1
Function: Navigation at the Management Level
Master Class 3 or Skipper Grade 1

Outcome	Content	Standards for evaluating competence
Plan and conduct a passage and determine position	**Celestial navigation** • Use of celestial bodies to determine the ship's position **Terrestrial and coastal navigation** Determine the ship's position by use of: • Landmarks • aids to navigation, including lighthouses beacons and buoys • dead reckoning, taking into account winds, tides, currents and estimated speed • Use navigational charts and publications such as sailing directions, tide tables, notices to mariners, radio navigational warnings and ship's routing information NOTE: ECDIS systems are considered to be included under the term "charts"	The information obtained from current navigational charts and publications is relevant and applied. Techniques used to determine the vessels position are justified relative to the prevailing conditions. Positions obtained from terrestrial and celestial bodies are within accepted limits. The accuracy of fixes is verified. Positions determined by electronic aids are within acceptable limits. Techniques used to check compass errors ensure accurate information. The selection of route is justified for the prevailing weather, sea and traffic conditions and intended manoeuvres.
	Electronic systems of position fixing and navigation • Ability to determine the ship's position by use of electronic navigation aids • Echo-sounders • Ability to operate the equipment and apply the information correctly	Ability to state limitations and operational parameters of electronic systems.
	Compass - magnetic and gyro • Principles of magnetic & gyro-compasses • Determine errors of the magnetic and gyro compass using celestial and terrestrial means, and to allow for such errors	Ability to state limitations and operational parameters of systems. Techniques used to check compass errors ensure accurate information.
	Steering Control Systems • Operational procedures and change-over from manual to automatic control and vice -versa • Adjustment of controls for optimum performance	Ability to state limitations and operational parameters of systems. Ability to operate heavy weather settings on autopilot.

(Continued…)

TABLE B5.1 — Function: Navigation at the Management Level
Master Class 3 or Skipper Grade 1 *(continued)*

Outcome	Content	Standards for evaluating competence
Plan and conduct a passage and determine position *(Continued)*	**Meteorology** • Use and interpretation of information obtained from shipborne meteorological instruments • The characteristics of the various weather systems, reporting procedures and recording systems • Application of the meteorological information available	Meteorological data is correlated and applied to maintain or adjust plan.
Maintain a safe navigational watch	**Watchkeeping** • The content, application and intent of the International Regulations for the Prevention of Collision at Sea (as amended) • Principles to be observed in keeping a navigational watch • Effective bridge teamwork procedures • The use of routing in accordance with the General Provisions on Ship's Routing	Conduct, handover and relief of the watch in conformation with STCW-95. Lookout is maintained at all times in conforming to Collision Regulations and STCW-95. Lights shapes and sound signals conform with the requirements of the International Regulations for the Prevention of Collision at Sea (as amended) and are correctly recognised. The frequency and extent of monitoring of traffic, the ship and the environment conform to accepted principles and procedures. A proper record is maintained of the movements and activities relating to the navigation of the ship. Responsibility for the safety of navigation is clearly defined at all times, including periods when the master is on the bridge and while under pilotage.
Use of Radar and ARPA to maintain safety of navigation	**Radar Navigation** • The fundamentals of radar and the automatic radar plotting aids (ARPA) • Operate and interpret and analyse information obtained from radar including the following: <u>Performance, including:</u> • factors affecting performance and accuracy • setting up and maintaining displays • detection of misrepresentation of information, false echoes, sea return etc., RACONs and SARTs <u>Use, including:</u> • range and bearing • course and speed of other ships • time and distance of closest approach of crossing, meeting overtaking ships	Information obtained from radar and ARPA is correctly interpreted and analysed, taking into account the limitations of the equipment and prevailing circumstances and conditions and actioned in accordance with International Regulations for the Prevention of Collision at Sea (as amended). Action taken to avoid a close encounter or collision with other vessels is in accordance with the International Regulations for the Prevention of Collision at Sea (as amended). Adjustments made to the ship's course and speed maintain safety of navigation and are in accordance with International Regulations for the Prevention of Collision at Sea (as amended). Communication is acknowledged and achieves the intended result. Manoeuvring signals are made at the appropriate time and are in accordance with the International Regulations for the Prevention of Collision at Sea (as amended).

(Continued…)

TABLE B5.1 — Function: Navigation at the Management Level
Master Class 3 or Skipper Grade 1 *(continued)*

Outcome	Content	Standards for evaluating competence
Use of Radar and ARPA to maintain safety of navigation *(continued)*	• identification of critical echoes; detecting course and speed changes in other ships; effect of changes in own ship's course or speed or both • application of the International Regulations for the Prevention of Collision at Sea (as amended) • plotting techniques and relative and true motion concepts • parallel indexing • Principle types of ARPA, their display characteristics, performance standards and the danger of over reliance on ARPA • Operate and interpret information obtained from ARPA, including: • system performance and accuracy, tracking capabilities and limitations and processing delays • use of operational warnings and system tests • methods of target acquisition and their limitations • true and relative vectors, graphic representation of target information and danger areas • deriving and analysing information, critical echoes, exclusion areas and trial manoeuvres	(See previous page)
Respond to Emergencies	**Emergency procedures** • Precautions for the protection and safety of passengers in emergency situations • Initial action to be taken following a collision or a grounding; initial damage assessment and control • Preparations for abandoning a vessel Procedures to be followed for rescuing persons from the sea, assisting a ship in distress, responding to emergencies which arise in port • Precautions for the protection of the environment following a marine incident • Responsibility to another vessel in the event of a collision • Preparations and procedures for towing or being towed	The type of emergency and scope is promptly identified. Initial actions and, if appropriate, manoeuvring of the ship is in accordance with contingency plans without risk to the vessel or crew safety. Follow-up actions are justified in accordance with Marine Safety procedures.

(Continued…)

TABLE B5.1 — Function: Navigation at the Management Level
Master Class 3 or Skipper Grade 1 *(continued)*

Outcome	Content	Standards for evaluating competence
Respond to a distress signal at sea	**Search and Rescue** • The contents of the IMO Merchant Ship Search and Rescue Manual (MERSAR) and national publications and arrangements	The distress or emergency signal is immediately recognised. Contingency plans and instructions in standing orders are implemented and complied with.
Use the IMO Standard Marine Communication Phrases in written and oral form	**English language** The English language to enable the officer to: • Use charts and other navigational publications • Understand meteorological information and messages concerning ship's safety and operation • Communicate with other ships and coast stations and to perform the officer's duties also with a multi-lingual crew, including the ability to use and understand the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases	Send and receive written and oral communications in English and IMO Standard Marine Communication Phrases. The communications are to achieve a specific response and deal with the following: • Charts and other navigational publications. • Meteorological information. • Messages concerning ship's safety and operation. • Communications with other ships and coast stations. • The performance of the officer's duties.
Transmit and receive information by visual signalling	**Visual signalling** • Transmit & receive signals by Morse light • Use the International Code of Signals	Communications by Morse Code and visual signalling are transmitted and received at a rate of 6 words per minute.
Manoeuvre the ship	**Ship Manoeuvring and handling** • The effects of deadweight, draft, trim, speed and under keel clearance on turning circles and stopping distances • The effects of wind and current on ship handling • Manoeuvres and procedures for the rescue of person overboard • Squat, shallow water and similar effects • Anchoring and mooring	Safe operating limits of ship propulsion, steering and power systems are not exceeded in normal manoeuvres. Adjustments made to the ship's course and speed maintain safety of navigation. Recover a person from the water. Berth and unberth the vessel. Anchor the vessel in accordance with ships standing procedures. Turn a vessel across the tide across the wind Williamson turn, short turn round.

TABLE B5.1 — Function: Navigation at the Management Level
Master Class 3 or Skipper Grade 1 *(continued)*

Methods and conditions for demonstrating competence (To be applied to all outcomes in this table)
Assessment by an accredited assessor in a— • working vessel; • training vessel; • simulator; or • approved training facility. Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions. The process can be a part of— • employment; • an approved training program; or • recognition of prior learning.

TABLE B5.2 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MASTER CLASS 3 OR SKIPPER GRADE 1
Function: Cargo Handling and Stowage at the Management Level
Master Class 3 or Skipper Grade 1

Outcome	Content	Standards for evaluating competence
Monitor the loading, stowage, securing and unloading of cargoes and their care during the voyage	**Cargo handling, stowage and securing** • Effects of cargo including heavy lifts on the seaworthiness and stability of the ship • Safe handling, stowage and securing of cargoes including dangerous, hazardous and harmful cargoes and their effect on the safety of life and of the ship • Safe use and maintenance of lifting appliances on board the ship	Cargo operations are carried out in accordance with the cargo plan or other documents and established safety rules/regulations, equipment operating instructions and shipboard stowage limitations. The handling of dangerous, hazardous and harmful cargoes complies with international regulations (IMDG Code) and recognised standards and codes of safe practice. Lifting appliances are operated and maintained in accordance with recognised standards and codes of safe practice.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

TABLE B5.3 — COMPETENCIES FOR A CERTIFICATE OF COMPETENCY AS A MASTER CLASS 3 OR SKIPPER GRADE 1
Function: Controlling the operation of the ship and care for persons on board at the Management Level
Master Class 3 or Skipper Grade 1

Outcome	Content	Standards for evaluating competence
Ensure compliance with pollution-prevention requirements.	**Prevention of pollution of the marine environment and anti-pollution procedures** • The precautions to be taken to prevent pollution of the marine environment • Anti-pollution procedures and all associated equipment	Procedures for monitoring shipboard operations and ensuring compliance with MARPOL and Australian requirements are fully observed.
Maintain the sea-worthiness of the ship.	**Ship stability** • Application of stability trim and stress tables, diagrams and stress-calculating equipment • Fundamental actions to be taken in the event of partial loss of intact buoyancy. • The fundamentals of watertight integrity **Ship construction** • The principal structural members of a ship and the proper names for the various parts • Methods of construction, ship design and sub-division requirements	The stability conditions comply with the IMO intact stability criteria under all conditions of loading. Actions to ensure and maintain the watertight integrity of the ship are in accordance with accepted practice. Impact of damage to the ship is assessed and managed as appropriate. Stress implications during loading/unloading or from weather are recognised and minimised by compliance with ship's procedures.
Manage the maintenance of the ship.	**Maintenance Procedures** • Selection & use of equipment and materials • Administer a planned maintenance system • Inspection and maintenance procedures • Planning for docking and slipping	Maintenance planning and implementation is in accordance with company/ship procedures and regulatory requirements.
Control safe access to and on the vessel.	**Access to the vessel** Rigging personnel and pilot access ways including: • Accommodation ladders • Gangways • Brows • Man baskets • Cargo Ramps • Helicopter access • Pilot ladders • Pilot hoists	Requirements to ensure access arrangements are rigged and maintained to ship/company policies and regulatory requirements. Procedures are in accordance with ship/company policy and regulatory requirements.

(Continued…)

TABLE B5.3 — Function: Controlling the operation of the ship and care for persons on board at the management level Master Class 3 or Skipper Grade 1 *(continued)*

Outcome	Content	Standards for evaluating competence
Control safe access to and on the vessel *(continued)*	**Access on the vessel** • Safety of personnel aloft or over side • Access to confined spaces	(see previous page)
Monitor compliance with legislative requirements	**Legislative compliance and administration** • The relevant IMO conventions, Federal and State Acts and Regulations and Codes concerning safety of life at sea and protection of the marine environment • Maritime declarations of health and requirements of the international health regulations • Certificate and other documents required to be carried on board vessels by international conventions, how they are obtained and period of validity • Registration of vessels; use of vessels register • Customs procedures including entry and clearance immigration requirements • Master's duties with respect to log books, musters and drills, marine casualties, employment of seamen, pilotage and vessel hygiene • Ballast water management procedures	Legislative requirements relating to safety of life at sea and protection of the environment are correctly identified and applied. Legislative and administrative requirements for the operation of a ship are correctly identified and applied.

Methods and conditions for demonstrating competence
(To be applied to all outcomes in this table)

Assessment by an accredited assessor in a—

- working vessel;
- training vessel;
- simulator; or
- approved training facility.

Using a combination of practical demonstration or practical exercises and theoretical explanation as appropriate to the subject and supported by oral or written questions.

The process can be a part of—

- employment;
- an approved training program; or
- recognition of prior learning.

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