



Australian Government

Assessment Requirements for MARH020 Forecast weather and oceanographic conditions to plan a safe passage

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the MAR Maritime Training Package.

Performance Evidence

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

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices
- calculating tidal conditions
- ensuring currency of relevant reference material
- observing, interpreting and forecasting weather and oceanographic conditions
- reading, interpreting and applying weather and oceanographic information
- selecting and using shipboard instruments to assist in forecasting weather and oceanographic conditions
- supporting reasons for intended action with statistical data and observations of actual conditions
- undertaking appropriate actions
- using appropriate nautical publications on tides and currents
- using tide tables to calculate height of tide.

Knowledge Evidence

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

- air masses and fronts
- appropriate actions, including:
 - avoiding storm centres and dangerous quadrants by adjusting course and speed
 - ensuring all crew and passengers are informed
 - ensuring all vessel equipment is properly secured
 - securing cargo and stores
 - taking action to avoid extreme adverse weather conditions
- basic principles for making meteorological and oceanographic measurements
- characteristics of various weather systems, including tropical revolving storms, and avoidance of storm centres and dangerous quadrants
- cloud classifications

- cyclones, storms and gales
- dangerous oceanographic conditions, including:
 - excessively high sea state and swells
 - ice formations on ship super structure and remedies
 - tornados, tropical revolving storms, hurricanes and gales
- effects on navigation and vessel handling of wind, currents and bottom topography
- formation of sea waves and swell waves
- heat exchange process
- ocean current systems, including surface water circulation of the ocean and principal adjoining seas
- pressure systems and cold fronts
- principles and procedures of weather forecasting using information obtained from observations, charts, satellite images, email, reports and instruments
- principles relating to the safety of navigation in ice
- procedures for filing and maintaining weather and oceanographic information
- procedures to be followed during gale or icy conditions and tropical revolving storms
- sea state
- sources of weather and oceanographic information, and methods for their interpretation
- synoptic and prognostic charts
- tide prediction
- tropical revolving storms
- types of floating ice, their origins and movements
- typical problems in forecasting weather and oceanographic conditions
- use of tide tables
- vertical division of the atmosphere
- voyage planning principles incorporating weather conditions, including:
 - air masses and fronts
 - cloud classifications
 - cyclones, storms and gales
 - heat exchange process
 - ocean currents and wave height
 - pressure systems and cold fronts
 - sea state
 - tide prediction
 - tropical revolving storms
 - use of tide tables
 - vertical division of the atmosphere
 - weather data provided by shipboard instruments
- WHS/OHS requirements and work practices.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within 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.

Practical assessment must occur in a workplace, or realistic simulated workplace, under the normal range of workplace conditions.

Simulations and scenarios may be used where situations cannot be provided in the workplace or may occur only rarely, in particular for situations relating to emergency procedures and adverse weather conditions where assessment would be unsafe, impractical or may lead to environmental damage.

Resources for assessment must include access to:

- applicable documentation, such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- tools, equipment, machinery, materials and relevant personal protective equipment (PPE) currently used in industry.

Links

Companion Volume implementation guide can be found in VetNet -

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