



Australian Government

Department of Education, Employment and Workplace Relations

TDMMA807B MONITOR THE CARE OF CARGO DURING A VOYAGE

Revision Number: 1

TDMMA807B MONITOR THE CARE OF CARGO DURING A VOYAGE

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to monitor and supervise the safe care of cargo during a voyage of a commercial vessel.

Application of the Unit

Application of the unit	The unit has application in qualifications for Master (Unlimited), Watchkeeper (Deck), Master (Less than 500 GT) and Master Class 3, i.e. Advanced Diploma of Transport&Distribution (Maritime Operations - Master Unlimited), Diploma of Transport&Distribution (Maritime Operations - Deck Watchkeeper).and Diploma of Transport&Distribution (Coastal Maritime Operations - Master Class 3).
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant sections of STCW 95, Marine Orders, the International Ship and Port Facility Security (ISPS) Code and NSCV/USL Code.
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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.</i>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Monitor the care of cargo during a voyage	<ul style="list-style-type: none"> a The cargo being carried is identified and its characteristics established prior to the voyage b Relevant regulations, procedures and instructions pertaining to the type of cargo being carried are accessed, interpreted and applied during the voyage c The vessel's cargo stowage plan is interpreted as per company procedures d The vessel's plan for the care of cargo during the voyage is implemented in accordance with company and customer requirements and relevant regulations e Action required to maintain the wellbeing of cargo during the voyage is initiated and monitored as per company procedures and customer requirements f The control of cargo sweat using shipboard ventilation and humidity control systems is monitored and supervised g Where relevant, required supervision of the care of livestock is carried out as required by company and customer requirements and relevant regulations h Communication with relevant personnel is clear, concise and acknowledged at all times according to good cargo care practice and regulations

ELEMENT	PERFORMANCE CRITERIA
2 Monitor compliance with safety and hazard control procedures for cargo	<ul style="list-style-type: none"> a Cargo stowage hazards are identified and action is taken to minimise or eliminate risk to personnel, cargo, vessel and the environment b Compliance with safety and hazard minimisation procedures and regulations related to cargo care is monitored at all times during a voyage to maintain the safety of personnel, cargo and vessel c Action is taken in the event of a cargo-related incident or emergency to rectify the problem, secure the cargo and the vessel and maintain the safety of the vessel and persons involved d Where relevant, precautions and procedures necessary for gas freeing a tank and for the entry of personnel into a tank are supervised e Where relevant, procedures and precautions necessary for entry into a pump room or other confined spaces on a vessel are supervised
3 Complete cargo care documentation	<ul style="list-style-type: none"> a Correct log book entries are made relating to cargo care operations and incidents during a voyage and other documentation is completed as required by company procedures and statutory regulations b A letter of protest is used in any untoward incident relating to cargo operations and care c All cargo reports and documentation are as per regulations

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Applicable sections of relevant maritime regulations
- 2 Relevant OH&S legislation, codes of practice, policies and procedures
- 3 Principles of cargo care, including:
 - a causes of cargo damage, their effect and preventative measures
 - b methods of temperature control of reefer cargoes
 - c causes effects and prevention of sweat, including the control of vessel and cargo sweat during a voyage, including the use of shipboard ventilation and humidity control systems
 - d differences between vessel's sweat and cargo sweat and reasons for the formation of both
 - e principles of cargo ventilation, including methods and systems
 - f function of dunnage
 - g cargo damage survey methods
- 4 Procedures and documentation required in the event of a safety incident when managing cargo care operations during a voyage
- 5 Methods for caring for various types of cargo during a voyage
- 6 Operational characteristics of different types of shipboard cargo care equipment and facilities
- 7 Hazards and problems associated with the carriage of various types of cargo and appropriate preventative and remedial action and solutions
- 8 Effects of different types of cargo on vessel's trim and stability
- 9 Procedures for calculations concerning weights, capacities, stowage factors, load densities, etc., including:
 - a calculating the maximum deadweight available to a vessel that needs to subsequently enter various seasonal load-line zones
 - b determining a vessel's displacement by draught survey

REQUIRED KNOWLEDGE

- c determining the forces acting on equipment used to lash cargo
- d calculating the longitudinal stresses acting on a vessel's hull using both manual/computer techniques

REQUIRED KNOWLEDGE

- 10 Effects on cargo of wind, weather and sea conditions during a voyage
- 11 Typical types and sizes of shipping containers
- 12 Standard stowage position numbering systems used on container vessels
- 13 IMDG Code
- 14 Cargo care communication techniques
- 15 Cargo care documentation requirements, including documentation to limit claims on cargo carried

TDMMA807B MONITOR THE CARE OF CARGO DURING A VOYAGE
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REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Read and interpret and apply instructions, regulations, procedures and information relevant to the loading, stowage, security and unloading of cargo
- 2 Communicate effectively with others during the loading, stowage, security and unloading of cargo
- 3 Provide leadership to others on matters related the loading, stowage, security and unloading of cargo
- 4 Take appropriate initiatives related to the loading, stowage, security and unloading of cargo
- 5 Interpret and apply security and safety practices and regulations when monitoring the loading, stowage, security and unloading of cargo
- 6 Modify activities dependent on differing workplace contingencies, risk situations and environments
- 7 Identify and solve problems associated with the loading, stowage, security and unloading of cargo and take appropriate action based on available information
- 8 Monitor and anticipate problems and risks related to the loading, stowage, security and unloading of cargo, and take appropriate action
- 9 Adapt to differing types of vessels, port facilities, cargoes and equipment

REQUIRED KNOWLEDGE

- 10 Monitor the use of equipment involved in the loading, stowage, security and unloading of cargo

Evidence Guide

Evidence Guide

TDMMA807B MONITOR THE CARE OF CARGO DURING A VOYAGE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

1 Critical aspects of evidence required to demonstrate competency in this unit	<p>Assessment must confirm appropriate knowledge and skills to:</p> <ul style="list-style-type: none"> a Monitor cargo care operations: <ul style="list-style-type: none"> 1 in normal and emergency situations 2 in normal and adverse weather conditions 3 across a representative range of typical cargo carriage contexts b Exercise all required safety, environmental and hazard control precautions and procedures when monitoring and supervising the care of cargo during a voyage c Identify typical cargo care problems and hazards and take appropriate action d Communicate effectively with others during cargo care operations
2 Evidence required for demonstration of consistent	<ul style="list-style-type: none"> a Performance is demonstrated consistently over a period of time and in a suitable range of contexts b Consistently applies underpinning knowledge and skills when:

Evidence Guide**TDMMA807B MONITOR THE CARE OF CARGO DURING A VOYAGE****performance**

- 1 planning and overseeing cargo care operations
 - 2 identifying and evaluating cargo care problems and determining appropriate courses of action
 - 3 applying safety precautions relevant to cargo care operations
 - 4 assessing operational capability of cargo care equipment
- c Shows evidence of application of relevant workplace procedures, including:
- 1 relevant maritime regulations
 - 2 ISM Code and associated vessel's safety management system and procedures
 - 3 OH&S regulations and hazard prevention policies and procedures
 - 4 job procedures and work instructions
 - 5 manufacturer's guidelines relating to the use of relevant vessel's machinery, including instructions on equipment capability and limitations
 - 6 security procedures
 - 7 following on-board housekeeping processes

Evidence Guide (continued)**TDMMA807B MONITOR THE CARE OF CARGO DURING A VOYAGE**

2 Evidence required for demonstration of consistent performance (continued)

- d Action is taken promptly to report and/or rectify accidents and incidents in accordance with statutory requirements and company procedures
- e Work is completed systematically with required attention to detail
- f Recognises and adapts appropriately to cultural differences

Evidence Guide (continued)**TDMMA807B MONITOR THE CARE OF CARGO DURING A VOYAGE**

	in the workplace, including modes of behaviour and interactions between crew and others
3 Context of assessment	<p>a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations</p> <p>b Assessment of this unit must be undertaken within relevant marine authority approved and audited arrangements by a registered training organisation:</p> <ol style="list-style-type: none"> 1 As a minimum, assessment of knowledge must be conducted through appropriate written/oral examinations, and 2 Appropriate practical assessment must occur: <ol style="list-style-type: none"> i at the registered training organisation; and/or ii on an appropriate working or training vessel
4 Specific resources required for assessment	<p>Access is required to opportunities to:</p> <p>a plan and manage suitably simulated cargo care operations over an appropriate range of situations, weather and operational conditions; and/or</p> <p>b plan and manage the actual cargo care operations during the voyage of a vessel</p>

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.

VARIABLE	SCOPE
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1. GENERAL CONTEXT

a Work must be carried out:	1 in compliance with relevant regulations
b Work is performed:	1 relatively independently within broad operational requirements, with limited accountability and responsibility for self and others in achieving the prescribed outcomes
c Work involves:	1 the monitoring and supervision of a significant range of cargo care operations across a wide and often unpredictable variety of cargo types and operational contexts. Monitoring and supervising the implementation of a broad plan or strategy for cargo care operations and stowage is required. Defined accountability and responsibility for self and others in achieving the outcomes is involved
d Work requires:	1 limited responsibility in the management of functions related to cargo care operations and procedures

2. WORKSITE ENVIRONMENT

a Cargo may be as carried on:	1 any Australian or international commercial vessel
b Cargo care operations may be carried out:	1 by day or night in both normal and emergency situations 2 under any permissible sea and weather conditions
c Types of cargo may include:	1 general cargo 2 containers 3 various types of solid bulk materials 4 various types of bulk liquids

Range Statement (continued)
**TDMMA807B MONITOR THE CARE OF CARGO
DURING A VOYAGE**

VARIABLE	SCOPE
c Types of cargo may include: (continued)	5 various types of liquefied gas 6 special and abnormal cargo such as: i refrigerated cargo and containers ii pig iron, ingots and steel billets iii livestock iv mineral concentrates v extra heavy cargo

d Cargo care hazards may include:	<ol style="list-style-type: none">1 damaged cargo2 cargo security in poor weather or sea conditions3 incorrectly stowed cargo4 incorrectly lashed or secured cargo5 non-compliance with safe working procedures
e Documentation and records may include:	<ol style="list-style-type: none">1 ISM Code safety management system plans, procedures, checklists and instructions2 cargo care operational orders and instructions3 relevant maritime regulations4 vessel's log5 vessel's Cargo Securing Manual6 vessel's Register of Materials Handling Equipment7 vessel/shore safety checklist8 company cargo care procedures9 cargo care equipment manufacturer's instructions and recommended procedures10 instructions of relevant maritime authorities11 relevant Australian and international standards and regulatory requirements

Range Statement (continued)**TDMMA807B MONITOR THE CARE OF CARGO
DURING A VOYAGE**

VARIABLE	SCOPE
f Applicable legislation, regulations and codes may include:	<ol style="list-style-type: none"> 1 relevant sections of IMO STCW 95 Convention and Code 2 relevant sections of AMSA Marine Orders 3 NSCV and Australian USL Code 4 International Ship and Port Facility Security (ISPS) Code 5 ISM Code 6 relevant international, Commonwealth, State and Territory OH&S legislation 7 International Grain Code 8 Lumber load-line requirements and the Code of Safe Practice for Ships carrying Timber Deck Cargo

Unit Sector(s)

Not applicable.

Field

Field MA Handling Cargo and Vessel Stability

Relationship to other units

Relationship to other units	The unit may be assessed in conjunction with other units that relate to the functions of the occupation(s) concerned.
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