

TDMMF2507B ENSURE SAFE WORKING PRACTICES

Revision Number: 1



TDMMF2507B ENSURE SAFE WORKING PRACTICES

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to establish and implement a workplace safety management plan on a commercial vessel, including the development of a safety management plan, formulation of safe working practices, monitoring of implementation of OH&S practices and procedures and the establishment of hazard and safety risk control strategies on board the vessel.

Application of the Unit

unit

Application of the The unit has application in qualifications for:

- Chief Engineer on a vessel of unlimited propulsion power operating in international waters, i.e. Advanced Diploma of Transport&Distribution(Marine Engineering Class 1)
- Chief Engineer on a vessel of 750 kW propulsion power or more operating in international waters, i.e. Advanced Diploma of Transport&Distribution(Marine Engineering Class 2).

Licensing/Regulatory Information

Licensing/legislati ve requirements

The unit is consistent with the relevant sections of STCW 95 and Marine Orders under the Australian Navigation Act, describing requirements for a Chief Engineers on vessels of unlimited propulsion power and 750 kW propulsion power or more operating in international waters.

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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA	
1 Develop an OH&S management plan and related safe	a OH&S policies are developed which clearly express the company and vessel's commitment to OH&S within the area of managerial responsibility and how relevant OH&S legislation will be implemented, consistent with overall company and vessel's policies and practice	
working practices and procedures	b OH&S responsibilities and duties which will allow implementation and integration of the OH&S system are clearly defined, allocated and included in job descriptions and duty statements for all relevant positions	
	c Financial and human resources for the operation of the OH&S system are identified, sought and/or provided in a timely and consistent manner	
	d Information on the OH&S system and safe working procedures for the area of managerial responsibility is provided and explained in a form which is readily accessible to crew, officers and others on board the vessel	

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ELEMENT		PERFORMANCE CRITERIA		
2	Provide training in safe working practices	a An OH&S training program is developed and implemented to identify and fulfil employees' OH&S training needs as part of the vessel's general training program.		
		PERFORMANCE CRITERIA		
EI	LEMENT			
3	Evaluate the organisation's OH&S system and related policies, procedures and programs	 a The effectiveness of the OH&S system and related policies, procedures and programs is assessed according to OH&S policy and the ISM Code. b Improvements to the OH&S system are developed and implemented to ensure more effective achievement of the company's organisation's aims as per OH&S policy and the ISM Code. c Inadequacies in existing risk control measures are identified in accordance with the hierarchy of control, and resources enabling implementation of new measures are sought and/or provided according to appropriate procedures d Compliance with OH&S legislation and codes of practice is assessed to ensure that legal OH&S standards are maintained as a minimum 		
4	Establish hazard reduction strategies	 a Existing and potential hazards within the area of managerial responsibility are correctly identified and identification confirmed as per OH&S legislation, ISM Code, codes of practice and trends identified from the OH&S records system b A procedure for ongoing identification of hazards is developed and integrated within systems of work and procedures, including the company and shipboard ISM Code safety management system c Activities are appropriately monitored to ensure that this procedure is adopted effectively throughout the area of managerial responsibility 		

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PE		PF	ERFORMANCE CRITERIA
ELEMENT			
		d	Hazard identification is addressed at the planning, design and evaluation stages of any change in the workplace to ensure that new hazards are not created
5	Establish and maintain procedures for assessing and controlling safety risks	a	Safety risks presented by identified hazards are correctly assessed in accordance with OH&S legislation and codes of practice
		b	A procedure for ongoing assessment of safety risks is developed and integrated within systems of work and procedures
		c	Activities are monitored to ensure that this procedure is adopted effectively throughout the area of managerial responsibility
		d	Risk assessment is addressed at the planning, design and evaluation stages of any change within the area of managerial responsibility to ensure that the risk from hazards is not increased
		e	Measures to control assessed safety risks are developed and implemented in accordance with the hierarchy of control, relevant OH&S legislation, codes of practice and trends identified from the OH&S records system
		f	When measures which control a risk at its source are not immediately practicable, interim solutions are implemented until a control measure is developed
		PF	ERFORMANCE CRITERIA
El	LEMENT		
5	Establish and maintain procedures	g	A procedure for ongoing control of safety risks, based on the hierarchy of control, is developed and integrated within general systems of work and procedures
	for assessing and controlling	h	Activities are monitored to ensure that the risk control procedure is adopted effectively throughout the area of managerial responsibility

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T		PERFORMANCE CRITERIA
E	LEMENT	
	safety risks (continued)	i Risk control is addressed at the planning, design and evaluation stages of any change within the area of managerial responsibility to ensure that adequate risk control measures are included
6	Establish and maintain a system for OH&S records	a A system for keeping OH&S records is established and monitored to allow identification of patterns of occupational injury and disease within the area of managerial responsibility, including provision for relevant shipboard OH&S reports to the company.

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- Relevant maritime regulations applicable to the management of OH&S on board a vessel
- The provisions of OH&S Acts, regulations and codes of practice relevant to the workplace, including legal responsibilities of employers, manufacturers, suppliers, employees and other parties with legal responsibilities
- 3 Principles and practices of effective OH&S management, including:
 - a elements of an effective OH&S management system
 - b risk management
 - c appropriate links to other management systems, e.g. contractors maintenance and purchasing
 - d the role of technical information and experts in designing hazard control measures, monitoring systems and health surveillance procedures
 - e the hierarchy of hazard and risk control measures
 - f arrangements for participation and consultation over OH&S
 - g incident and accident investigation arrangements

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REQUIRED KNOWLEDGE

- 4 Management arrangements relating to regulatory compliance, for example, arrangements for:
 - a keeping the organisation abreast of developments in OH&S, for example, current regulations, control measures and hazards, mandatory notifications and reporting requirements
 - b mandatory licences and certificates
 - c registers, listings and labelling of regulated materials, for example, hazardous substances and
 - d dangerous goods
 - e communicating with the crew about OH&S
 - f consulting about, and participating in, OH&S management
 - g identifying and reporting on hazards, for example, through audits and inspections
 - h assessing and controlling safety risks
 - i monitoring risk control measures
 - j allocating financial, technical and human resources for OH&S
 - k responding to, and dealing with, hazardous events
 - 1 OH&S training
 - m OH&S record keeping
 - n collection and use of OH&S-related data

Hazards and associated safety risks that exist on the vessel, including:

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- a the range of control measures available for these safety risks
- b considerations for choosing between different control measures
- c how to identify when expert advice is needed

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Hazards and associated safety risks that exist on the vessel, including:

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- 6 How the characteristics and composition of the workforce impact on OH&S management, including:
 - a level of literacy and communication skills
 - b cultural background
 - c gender
 - d qualifications and experience of crew
- The relevance to OH&S management of other organisational management systems, policies and procedures, including:
 - a operational planning (especially technological and organisational change and workplace design)
 - b finance, contracting and purchasing
 - c materials transport and storage
 - d maintenance
 - e training
 - f human resource management and equal employment opportunity policies
- 8 Procedures for analysing the working environment in order to identify hazards, assess safety risks and design and implement appropriate OH&S management systems
- 9 Procedures for analysing relevant workplace data, e.g. incident and environmental monitoring to identify hazards, assess safety risks and evaluate the effectiveness of the OH&S management system
- 10 Procedures for assessing the resources needed to establish and maintain OH&S management systems, including a range of risk control measures

REQUIRED SKILLS

This describes the basic skills required for this unit.

1 Communicate effectively with other personnel on matters related to the

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REQUIRED SKILLS

management of workplace safety on a vessel

- 2 Interpret and follow regulations and procedures for the management of workplace safety on a vessel
- 3 Read and interpret material safety data sheets
- 4 Read and interpret specifications, equipment drawings, operational manuals, and electrical circuit diagrams
- 5 Communicate with multilingual crew where applicable using established techniques
- 5 Prepare reports on matters related to the management of workplace safety on a vessel
- 6 Analyse and interpret relevant workplace data, e.g. incident and environmental monitoring to identify hazards, assess safety risks and evaluate the effectiveness of the OH&S management system
- 7 Provide leadership to other shipboard personnel when managing workplace safety on a vessel
- 8 Recognise problems and hazards that can arise when managing workplace safety on a vessel, take appropriate remedial action, and initiate appropriate solutions
- 9 Plan and organise the resources needed to establish and maintain OH&S management systems, including a range of risk control measures
- 10 Adapt to differing types of safety equipment and systems from one vessel to another and when equipment and systems are changed on a vessel
- 11 Coordinate the safe use of tools and equipment required for the engineering operations on a vessel

Evidence Guide

Evidence Guide

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Evidence Guide

TDMMF2507B ENSURE SAFE WORKING PRACTICES

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

Assessment must confirm appropriate knowledge and skills to:

- a Develop an OH&S management plan and related safe working practices and procedures
- b Provide training in safe working practices
- c Evaluate the company and shipboard OH&S system and related policies, procedures and programs
- d Establish hazard reduction strategies
- e Establish and maintain procedures for assessing and controlling safety risks on board vessel
- f Establish and maintain a system for OH&S record
- g Communicate effectively with others about OH&S management plan and procedures and their implementation

2 Evidence required for demonstration of consistent performance

- 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:
 - 1 developing an OH&S management plan and related safe working practices and procedures
 - 2 providing training in safe working practices
 - 3 evaluating the vessel's OH&S system and related policies, procedures and programs
 - 4 establishing hazard reduction strategies
 - 5 establishing and maintaining procedures for assessing and controlling safety risks

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Evidence Guide

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- 6 establishing and maintaining a system for OH&S records
- c Shows evidence of application of relevant workplace procedures, including:
 - 1 relevant sections of international Conventions and Codes and AMSA Marine Orders
 - 2 OH&S regulations and hazard prevention policies and procedures

Evidence Guide (continued)

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Evidence required for demonstration of consistent performance (continued)

- 3 ISM Code safety management system procedures and work instructions
- Action is taken promptly to report and/or rectify hazards, safety risks and safety incidents in accordance with statutory requirements, company procedures and the ISM Code
- e Work is managed, controlled and completed systematically with required attention to detail
- f Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among crew and others

3 Context of assessment

- a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations
- b Assessment of this unit must be undertaken within relevant marine authority approved and audited arrangements by a registered training organisation:
 - 1 As a minimum, assessment of knowledge must be conducted through appropriate written/oral examinations, and

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Evidence Guide (continued)

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- 2 Appropriate practical assessment must occur:
 - i at the registered training organisation; and/or
 - ii on an appropriate working or training vessel

4 Specific resources required for assessment

Access is required to opportunities to:

- a participate in a range of practical and theoretical assignments, exercises, case studies and other assessments that demonstrate the skills and knowledge to develop and implement required safety management plans and procedures on board a vessel, including the development of workplace safety practices and procedures, hazard and risk control strategies, safety-related training, and documentation of safety management plans and safety incident reports; and/or
- b carry out safety management functions on a commercial or training vessel

Range Statement

Range Statement

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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

1. GENERAL CONTEXT

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Range Statement TDMMF2507B ENSURE SAFE WORKING PRACTICES

a.	Work must be carried out:	1 in compliance with mandatory OH&S rules and regulations and IMO Conventions and Codes, including the relevant sections of the AMSA Marine Orders and the ISM Code
b.	Work is performed:	1 relatively independently under broad operational requirements, with accountability and responsibility for self and others in achieving the prescribed outcomes
c.	Work involves:	1 the application of safety management and hazard and risk control principles to the management of workplace safety on a vessel across a wide and often unpredictable variety of operational contexts. Contribution to the development and implementation of a broad management plan or strategy for shipboard safety is required and accountability and responsibility for self and others in achieving the outcomes is involved
d.	Work requires:	1 significant judgement, leadership and technical expertise in development and implementation of safety management plans, the formulation of safe working practices and procedures and the development of hazard and risk control strategies. This includes management, training and control of personnel, interpretation of safety regulations and statutory requirements and the identification and analysis of the workplace hazards and safety risks on board a vessel
2.	WORKSITE	ENVIRONMENT
a	Vessel may	1 any Australian or international commercial vessel

a	Vessel may include:	1 any Australian or international commercial vessel
b	Safety management plans must encompass:	1 encompass all work areas on board vessel, including those involving work in enclosed spaces, exposed conditions and controlled or open environment

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		SC	OPE
VARIABLE			
c	Safe working	1	by day or night in both normal and emergency situations
	practices and hazard and safety risk control	2	under any permissible conditions of weather and loading
		3	while underway
	strategies must be applied at	4	during berthing and unberthing operations
	all times, including:	5	while anchoring or mooring
		6	when slipped or in dry dock
		7	when bunkering
		8	during cargo operations
d	Emergencies	1	loss of propulsion
	may include:	2	loss of electrical power
		3	loss of steering
		4	flooding of vessel
		5	fire or explosion
		6	loss of refrigeration
		7	loss of water making ability
		8	fuel oil, lubrication oil, steam and gas leaks
		9	overheating and overspeed of machinery, governors, emergency trips
		10	dangerous atmosphere

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- e Workplace hazards may include but are not restricted to:
- 1 moving heavy loads in an unsafe work environment
- 2 unsecured machinery, components or repaired equipment
- 3 slippery deck
- 4 welding equipment
- 5 sharp tools and implements
- 6 power tools
- 7 moving and rotating machinery
- 8 flammable liquids, vapours and fuel
- 9 faulty machinery equipment handling equipment and lifting gear
- 10 using equipment beyond safe working limits
- 11 poor housekeeping procedures

Range Statement (continued)

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SCOPE

VARIABLE

e Workplace hazards may include but are not restricted to:

(continued)

- 12 non-compliance with safe working procedures
- 13 electrical wiring and systems, including exposed electrical circuits
- 14 hot pipes and valves (steam, fuel oil, lubricating oil)
- 15 cold pipes and valves (refrigeration and liquefied gas cargoes)
- 16 working at heights

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- 17 toxic gases and substances
- 18 chemicals and other harmful substances
- 19 damaged cargo and containers, dangerous cargoes

f Establishment and maintenance of an OH&S management framework may include:

- 1 policy development and updating
- determining the ways in which OH&S will be managed. This may include distinct OH&S management activities, or inclusion of OH&S functions within a range of management functions and operations such as:
 - i maintenance of plant and equipment
 - ii purchasing of materials and equipment
 - iii designing operations, work flow and materials handling
 - iv planning or implementing alterations to site, plant, operations or work systems
- mechanisms for review and allocation of human, technical and financial resources needed to manage OH&S, including defining and allocating OH&S responsibilities for all relevant positions
- 4 mechanisms for keeping up to date with relevant OH&S information and updating the management systems

g Establishment and maintenance of participative arrangements for management of OH&S may cover:

- 1 OH&S committees and other committees, e.g. consultative planning and purchasing
- 2 health and safety representatives
 - employee and supervisor involvement in OH&S management activities, e.g. OH&S inspections audits environmental monitoring risk assessment and risk control
- 4 procedures for reporting hazards safety risks and OH&S issues by managers and employees

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5 inclusion of OH&S in consultative or other meetings and processes

$Range\ Statement\ (continued)$

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		SCOPE
V	ARIABLE	
h	Establishment and maintenance of procedures for identifying hazards may include developing and updating procedures for:	 workplace inspections, including plant and equipment audits maintaining and analysing OH&S records, including environmental monitoring and health surveillance reports maintenance of plant and equipment reviews of materials and equipment purchases, including manufacturer's and supplier's information employee reporting of OH&S issues shipboard OH&S reports to company and AMSA
i	Establishment and maintenance of procedures for assessing safety risks may include developing and updating procedures for:	 determining the likelihood and severity of adverse consequences from hazards OH&S audits workplace inspections, work permits maintenance of plant and equipment purchasing of materials and equipment planning or implementing alterations to site operations or work systems

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- 7 analysis of relevant records and reports, for example injuries and incidents hazardous substances inventories/registers, audit and environmental monitoring reports and OH&S committee records
- j Establishment and maintenance of procedures for controlling safety risks may include developing and updating procedures for:
- 1 assessing the OH&S consequences of materials, plant or equipment prior to purchase;
- 2 obtaining expert advice
- appropriate application of measures according to the hierarchy of control, namely:
 - i elimination of the risk
 - ii engineering controls
 - iii administrative controls
 - iv requirements for the use of personal protective clothing and equipment
- 4 designing safe operations and systems of work
- 5 inclusion of new OH&S information into procedures
- 6 checking compliance with regulatory requirements

Range Statement (continued)

TDMMF2507B ENSURE SAFE WORKING PRACTICES

	SCOPE
VARIABLE	
k Establishment and maintenance of	 making inventories of, and inspecting, high risk operations inspecting systems and operations associated with potentially hazardous events, for example: emergency communications,

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	organisational procedures for hazardous events may include:	3	links to emergency services, firefighting, chemical spill containment first aid services
1	Establishment and maintenance of an OH&S training program may include:	1 5 6 7 8	arrangements for ongoing assessment of training needs, for example, relating to: i training for specific hazards or hazardous tasks or equipment ii training or drills for emergencies and evacuations iii specific training required under OH&S legislation allocation of resources for OH&S training, including acquisition of training resources development of staff training skills and purchase of training services induction safety training for new crew training for new operations, transfer to new assignments, materials or equipment.
m	Establishment and maintenance of a system for OH&S records may include:	1 2	workers' compensation and rehabilitation records hazardous substances registers reviewing the effectiveness of the OH&S management
	the organisation's OH&S system	2	regular review of operating procedures

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Range Statement (continued) TDMMF2507B ENSURE SAFE WORKING **PRACTICES** may include 3 regular analysis of OH&S records arrangements for: 4 audits against OH&S legislative requirements 5 shipboard OH&S reports to company and AMSA **Documentation** ISM Code safety management system plans, procedures, checklists and instructions and records may include: Range Statement (continued) TDMMF2507B ENSURE SAFE WORKING **PRACTICES SCOPE VARIABLE Documentation** vessel's and company's safety management policies, emergency contingency plans and procedures and records may include: identifying records required under OH&S legislation, for (continued) example: workers' compensation and rehabilitation records hazardous substances registers

iii material safety data sheets

certificates and licences

OH&S audits and inspection reports

maintenance and testing reports

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major accident/injury notifications and

manufacturer's and supplier's OH&S information

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- 7 workplace environmental monitoring and health surveillance records
- 8 records of instruction and training
- 9 first aid/medical post records

p Applicable regulations and legislation may include:

- relevant sections of national and international regulations, IMO Conventions and Codes, including AMSA Marine Orders and classification society rules dealing with OH&S in shipboard workplaces
- 2 relevant international, Commonwealth, State and Territory OH&S legislation, particularly:
 - i OH&S Acts, regulations and codes of practice, including regulations and codes of practice relating to hazards present in the workplace or industry
 - i general duty of care under OH&S legislation and common law
 - iii requirements for the maintenance and confidentiality of records of occupational injury and disease
 - iv requirements for provision of OH&S information and training
 - v provisions relating to OH&S representatives and/or OH&S committees
 - vi provisions relating to OH&S issue resolution.

Unit Sector(s)

Not applicable.

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Field

Field MF Operational Quality and Safety

Relationship to other units

Relationship to	The unit may be assessed in conjunction with other units that
other units	form part of a maritime worker's job function.

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