



Australian Government

Department of Education, Employment and Workplace Relations

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

Revision Number: 1

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to survive at sea in the event of vessel abandonment. It includes practising survival techniques, operating lifesaving and survival equipment, and participating in abandon vessel drills.

Note: Training and assessment may be customised to suit the applicable types and size of vessels and the various survival craft and equipment carried by the vessels to meet regulatory requirements.

Application of the Unit

Application of the unit	The unit has applications in qualifications for all maritime deck and engineering occupations and covers mandatory requirements in survival skills for all seafarers.
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant maritime regulations describing mandatory requirements for familiarisation and basic safety competency required for all seafarers. This includes applicable sections of international, Commonwealth, State and Territory Maritime licensing and regulatory requirements.
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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Practise survival techniques	<ul style="list-style-type: none"> a The timing and sequence of individual survival actions are appropriate to the prevailing circumstances and conditions of the emergency and minimise potential dangers and threats to other survivors b Initial actions when boarding survival craft enhance chance of survival c Jumps safely from a height into the water in accordance with established survival practice d Swims while wearing a life-jacket and floats without a life-jacket in accordance with established survival practice e Inverted liferaft is righted while wearing a life-jacket in accordance with established survival practice f Appropriate handling strategies are applied to manoeuvre survival craft in rough weather and sea conditions g Sea anchors and drogues are deployed in accordance with accepted nautical practice

ELEMENT	PERFORMANCE CRITERIA
<p>1 Practise survival techniques (continued)</p>	<p>h Signs of hypothermia are identified and treated in accordance with accepted survival medical practice</p> <p>i (Where applicable) exposure cover is deployed on survival craft in accordance with accepted survival practice and manufacturer's instructions</p> <p>j Relevant first aid is administered in survival craft</p> <p>k Rationing of food is in accordance with accepted survival practice</p>
<p>2 Operate lifesaving and survival equipment</p>	<p>a Location and accessibility of lifesaving and survival equipment is established</p> <p>Survival craft are launched in a timely and effective manner</p> <p>b Method of boarding survival craft is appropriate and avoids dangers to other survivors</p> <p>c Survival equipment is operated in accordance with instructions and accepted survival practice</p> <p>d Survival radio equipment is operated in accordance with manufacturer's instructions and regulatory protocols</p> <p>e Life-jacket and other lifesaving clothing are correctly used in accordance with instructions</p>
<p>3 Participate in abandon vessel drills</p>	<p>a Abandon vessel musters and drills are attended in accordance with regulatory requirements and company procedures</p> <p>b Action taken on identifying muster signals is appropriate to the indicated emergency and complies with established procedures</p> <p>c Information on the use of lifesaving equipment and procedures to be followed in the event of the order to abandon vessel is obtained and correctly interpreted</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Relevant maritime regulations dealing with survival at sea following abandonment of vessel
- 2 Relevant OH&S legislation and policies
- 3 SOLAS regulations
- 4 Emergency muster and abandon vessel signals
- 5 Importance of being ready for any shipboard emergency
- 6 Procedures for emergency response on board vessels, including abandoning vessel
- 7 Initial actions for survival on abandonment of vessel as summarised in maritime survival publications such as the AMSA publication 'Survival at Sea - a Training and Instruction Manual'
- 8 Value of training and emergency drills for enhancing chances of survival at sea
- 9 Location of lifesaving appliances on a vessel
- 10 Construction, outfit and particular characteristics of various types of applicable survival craft
- 11 Equipment found in survival craft, its function and the procedures for its use
- 12 Procedures for correctly operating and using lifesaving appliances and personal safety equipment on board vessels and survival craft, and specifically:
 - a donning a life-jacket and using a life-jacket light and whistle
 - b donning an immersion suit (where applicable)
 - c deployment of a mob combination light and smoke float
 - d use of hand-held pyrotechnics
 - e use of hydrostatic releases
 - f launching survival craft

REQUIRED KNOWLEDGE

- 14 Threats to survival on abandonment of a vessel and appropriate strategies for countering these threats
- 15 Ways of maximising detectability and location of survival craft using pyrotechnic distress signals, portable VHF radios, satellite EPIRBs and SARTs
- 16 IMO safety symbols
- 17 Procedures for the rationing of food and water in survival craft
- 18 Personal protective clothing and equipment - its purpose and use
- 19 Symptoms of hypothermia, its prevention and treatment and the related use of protective covers and garments such as immersion suits and thermal protective aids
- 20 Maritime communication techniques

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Communicate effectively with other personnel and passengers during simulated and real abandon vessel musters and emergencies
- 2 Read and interpret instructions on emergency procedures and on the use of lifesaving and survival equipment
- 3 Collect, manage and interpret information on the use of lifesaving equipment and procedures to be followed in the event of the order to abandon vessel
- 4 Recognise and interpret muster signals appropriately for the indicated emergency
- 5 Plan the timing and sequence of individual survival actions to be appropriate to the prevailing circumstances and conditions of the emergency and minimise potential dangers and threats to other survivors
- 6 Work collaboratively with other shipboard personnel and passengers during an emergency
- 7 Carry out calculations involved in rationing food and water
- 8 Make appropriate estimates and calculations involved when in charge of survival craft

REQUIRED SKILLS

- 9 Determine the type and extent of an emergency and determine the appropriate survival action to be taken
- 10 Right an inverted liferaft
- 11 Ration food and water
- 12 Identify hypothermia and provide appropriate treatment
- 13 Deploy and use survival craft during a simulated emergency.
- 14 Operate survival radio equipment
- 15 Don various thermal protective aids, life-jacket and other lifesaving clothing

Evidence Guide

Evidence Guide

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

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.

<p>1 Critical aspects of evidence required to demonstrate competency in this unit</p>	<p>Assessment must confirm appropriate knowledge and skills to:</p> <ol style="list-style-type: none"> a Practise survival techniques in suitably simulated situations b Operate and use the various types of survival equipment typically found on applicable vessels in suitably simulated situations c Participate in abandon vessel musters and drills d Communicate effectively with others as required when operating survival craft and ancillary survival equipment
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Evidence Guide

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

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 participating in simulated emergency response musters and drills
 - 2 operating survival equipment
 - 3 applying safety precautions relevant to survival operations
 - 4 assessing operational capability of survival craft and equipment
- c Shows evidence of application of relevant workplace procedures, including:
 - 1 relevant maritime regulations
 - 2 OH&S regulations and hazard prevention policies and procedures
 - 3 accepted survival procedures and maritime survival practice
 - 4 relevant manufacturer's guidelines relating to the operation and use of survival equipment, including instructions on equipment capability and limitations
- d Action is taken promptly to address any problems that may arise when following vessel abandonment procedures
- e Work is completed systematically with required attention to detail
- f Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions between crew and others

Evidence Guide (continued)

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

<p>3 Context of assessment</p>	<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 in a suitable training pool iii on an appropriate working or training vessel
<p>4 Specific resources required for assessment</p>	<p>Access is required to opportunities to:</p> <ol style="list-style-type: none"> a carry out a range of suitably simulated practical and knowledge assessments that demonstrate the skills and knowledge to abandon vessel and survive at sea; and/or b participate in vessel musters and drills in appropriately simulated maritime conditions; and/or c participate in abandon vessel simulations and drills on board an operational commercial or training vessel <p>Note: Simulated abandon vessel and survival situations and assessments may require access to survival equipment typically found on the coastal or ocean-going vessels concerned, a training pool with jumping platform or equivalent and immersion suits (where applicable).</p> <p>Assessments must be conducted in accordance with relevant OH&S requirements. Protective clothing must be worn in accordance with current maritime practices and Australian standards. At least one assessor must hold a current lifesaving qualification appropriate for in-water training and</p>

Evidence Guide (continued)

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

assessment exercises

Range Statement

Range Statement

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

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

a. Work must be carried out:	1 in compliance with the relevant maritime regulations.
b. Work is performed:	1 in response to abandon vessel alarms and follow a prescribed range of survival procedures either individually or in a team environment with some accountability for the safety of self and others. This includes response to abandon vessel musters in both simulated and real emergency circumstances.
c. Work involves:	1 the use of known and defined survival procedures and techniques across a variety of maritime survival contexts.

2. WORKSITE ENVIRONMENT

Range Statement
TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

a Vessel may include:	1 any Australian or international commercial vessel
b Emergencies that may lead to abandonment of vessel include:	1 collision resulting in damage to the integrity of the vessel's hull 2 fire 3 foundering 4 flooding of vessel's compartments
c Vessel abandonment may take place:	1 by day or night 2 under normal and adverse conditions of sea and weather 3 while underway 4 while hove to 5 while anchored or moored 6 in appropriately simulated situations

Range Statement (continued)
TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

VARIABLE	SCOPE
d Dependent on the size and operating range of the vessel its	1 inflatable liferafts 2 solid liferafts 3 floats

Range Statement (continued)

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

survival craft may include:	<ul style="list-style-type: none"> 4 free-fall lifeboats 5 davit-launched lifeboats
e Lifesaving and survival equipment may include:	<ul style="list-style-type: none"> 1 life-jackets 2 life-buoys 3 hard hats 4 immersion suits and other thermal protective aids 5 rocket line throwing appliances 6 pyrotechnic distress signals 7 GMDSS survival craft VHF radios 8 satellite emergency position indicating radio beacons (EPIRBs) 9 search and rescue transponders (SARTs) 10 whistles
f Consumable materials and items that may be used in lifesaving equipment may include:	<ul style="list-style-type: none"> 1 batteries for detectors, radios, beacons, etc. 2 flares 3 survival rations
g In-water survival techniques may include:	<ul style="list-style-type: none"> 1 swimming in a life-jacket 2 towing with a life-jacket 3 remaining afloat without a life-jacket

Range Statement (continued)

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

- 4 donning a life-jacket in water
- 5 righting an upturned liferaft
- 6 boarding a liferaft
- 7 the group huddle
- 8 heat escape lessening posture

Range Statement (continued)

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

VARIABLE	SCOPE
h Threats to survival after abandoning vessel may include:	<ul style="list-style-type: none"> 1 cold water shock 2 hypothermia 3 psychological response to disaster 4 loss of will to live 5 sea sickness 6 dehydration 7 injuries 8 starvation
i Documentation and records may include:	<ul style="list-style-type: none"> 1 relevant maritime regulations 2 SOLAS regulations 3 AMSA publication 'Survival at Sea - a Training and Instruction Manual'

Range Statement (continued)

TDMMF1107B SURVIVE AT SEA IN THE EVENT OF VESSEL ABANDONMENT

	<p>4 instructions from official search and rescue authorities</p> <p>5 vessel's procedures for emergency response, including abandoning vessel</p> <p>6 manufacturer's instructions for the use of survival craft and equipment</p> <p>7 instructions of relevant maritime authorities related to survival at sea</p> <p>8 relevant OH&S legislation, codes of practice, policies and procedures</p> <p>9 relevant Australian and international standards</p>
<p>j Applicable legislation, regulations and codes may include:</p>	<p>1 Relevant maritime regulations, including</p> <ul style="list-style-type: none"> i relevant sections of State and Territory maritime regulations, NSCV and USL Code ii IMO STCW 95 Convention and Code dealing with survival at sea and use of survival craft and equipment iii relevant sections of AMSA Marine Orders dealing with survival at sea and use of survival craft and equipment <p>2 Safety of Life at Sea (SOLAS) regulations</p> <p>3 relevant international, Commonwealth, State and Territory OH&S legislation</p>

Unit Sector(s)

Not applicable.

Field

Field MF Operational Quality and Safety

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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