

PIRFO OBSERVER STANDARDS

PIROBS3.01C – Take emergency action on board a vessel

Functional area **Observer operations**

Prerequisites **None required**

Descriptor

This unit covers the performance outcomes, skills and knowledge necessary for a person to apply basic survival skills in the event of vessel abandonment and carry out fire minimisation procedures and fight a fire on board a vessel.

Certification comparable to the International Maritime Organisation (IMO) model courses STCW2010 Fire Prevention and Fire Fighting and STCW2010 Personal Survival Techniques is accepted as equivalent. Similarly, certification comparable to the Regional Maritime Programme model courses SPC 001 Survival Techniques and SPC 002 Fire Prevention and Control is also accepted as equivalent.

Refer to the syllabus of any other identified equivalent sea safety training course for the detailed evidence guides associated with each assessment criteria to determine if the course meets the requirement of this PIRFO unit of competency.

Elements

1. Apply survival techniques

Performance criteria

- 1.1 Employ individual survival actions that are appropriate to the prevailing circumstances and conditions of the emergency and minimise potential dangers and threats to other survivors
- 1.2 Jump safely from a height into the water in accordance with established survival practice
- 1.3 Swim while wearing a life-jacket and float without a life-jacket in accordance with established survival practice
- 1.4 Follow correct initial actions when boarding the survival craft to enhance chance of survival
- 1.5 Right an inverted liferaft in accordance with established survival practice
- 1.6 Apply appropriate handling strategies to manoeuvre survival craft in rough weather and sea conditions
- 1.7 Deploy sea anchors and drogues in accordance with accepted practice
- 1.8 Administer first aid as necessary, identify signs of hypothermia and treat in accordance with accepted survival medical practice
- 1.9 Ration food in accordance with accepted survival practice

2. Operate lifesaving and survival equipment

- 2.1 Establish location and accessibility of lifesaving and survival equipment
- 2.2 Launch survival craft in a timely and effective manner
- 2.3 Board survival craft appropriately and help others to board if necessary

- 2.4 Operate survival equipment in accordance with instructions and accepted survival practice
- 2.5 Operate survival radio equipment in accordance with manufacturer's instructions and regulatory protocols
- 2.6 Use life-jacket and other lifesaving clothing correctly in accordance with instructions
- 3. Participate in abandon vessel drills**
 - 3.1 Participate in abandon vessel musters and drills in accordance with regulatory requirements and vessel procedures
 - 3.2 Take action on identifying muster signals that is appropriate to the indicated emergency and complies with established procedures
 - 3.3 Obtain and correctly interpret information on the use of lifesaving equipment and procedures to be followed in the event of the order to abandon vessel
- 4. Carry out fire minimisation procedures**
 - 4.1 Identify fire hazards on board a vessel and take action to eliminate or minimise them
 - 4.2 Identify fire prevention equipment and systems as appropriate and take appropriate action to ensure that they are operational
 - 4.3 Maintain a state of readiness to respond to fire emergencies at all times
- 5. Respond to emergency situations involving fire**
 - 5.1 Identify emergency situations involving fire
 - 5.2 Follow established initial action practices and procedures on becoming aware of a fire emergency
 - 5.3 Take timely action that is appropriate for the seriousness of the fire emergency
 - 5.4 Take appropriate action on identifying muster signals for a fire emergency that complies with established procedures
 - 5.5 Implement appropriate precautions and procedures when responding to fires involving electricity
 - 5.6 Communicate clearly and concisely at all times and acknowledge instructions in a timely manner
- 6. Operate portable fire fighting equipment**
 - 6.1 Identify correctly classes of fires in accordance with accepted fire fighting practice
 - 6.2 Select correct portable fire fighting equipment to fight specific classes of fires
 - 6.3 Extinguish a fire correctly with a fire blanket in accordance with accepted fire fighting practice
 - 6.4 Apply correct techniques when using hose lines to extinguish fires on board a vessel
- 7. Carry out fire fighting operations**
 - 7.1 Follow correct procedures and techniques when fighting fires in simulated or real fire emergencies
 - 7.2 Select safety clothing, appliances and equipment that are appropriate to the nature of the fire fighting operations

- 7.3 Apply appropriate safety precautions and procedures when fighting fires in accordance with regulatory requirements, vessel's procedures and established fire fighting practice
- 7.4 Use fire fighting equipment and procedures as a member of a fire fighting team in accordance with accepted fire fighting practice
- 7.5 Use lifelines correctly during interior fire fighting operations
- 7.6 Follow correct procedures when operating fixed fire extinguishing systems in machinery spaces
- 7.7 Operate emergency fuels and ventilation shut-offs correctly
- 7.8 Follow boundary cooling techniques
- 7.9 Operate and test fixed fire extinguisher systems correctly

Evidence guide

Each unit of competency has an evidence guide that relates directly to the performance criteria. Its purpose is to guide assessment of the unit in the workplace and/or training program. The following components provide information to assist this purpose.

Required knowledge

The essential knowledge and understanding a person needs to perform work to the required standard include:

- Relevant maritime regulations concerning survival at sea following abandonment of vessel basic fire prevention and basic fire fighting on board a coastal vessel
- Emergency muster and abandon vessel signals
- Procedures for emergency response on board vessels, including abandoning vessel
- Initial actions for survival on abandonment of vessel
- Location of lifesaving appliances on a vessel
- Characteristics of various types of applicable survival craft
- Equipment found in survival craft, function and the procedures for its use
- Procedures for correctly operating and using lifesaving appliances, hydrostatic releases and personal safety equipment on board vessels and survival craft
- Ways of maximising detectability and location of survival craft using pyrotechnic distress signals, portable VHF radios, EPIRBs and SARTs
- IMO safety symbols
- Procedures for the rationing of food and water in survival craft
- Personal protective clothing and equipment - purpose and use
- Symptoms of hypothermia, its prevention and treatment
- The chemistry of fire and its relationship to materials typically carried on vessels
- Principles underlying the spread of fire and its extinguishment, including
 - the fire triangle
 - types and sources of ignition
 - flammable materials and fire hazards
 - factors that influence the spread of fire
- The different classes of fire, their characteristics and strategies and equipment needed for their extinguishment

- Fire fighting clothing, outfits and personal safety equipment used when fighting a fire on board a vessel
- Procedures to be followed in the event of an engine room fire

Required skills

The essential skills a person needs to perform work to the required standard include:

- Communicating effectively during simulated and real abandon vessel musters, emergencies and fire fighting
- Recognising and interpreting muster signals appropriately for the indicated emergency
- Donning a life-jacket and using a life-jacket light and whistle
- Launching a life raft
- Entering the water correctly and boarding a survival craft
- Adopting heat escape lessening positions while in the water
- Using hand-held pyrotechnics
- Righting an inverted liferaft
- Rationing food and water
- Identifying hypothermia and providing appropriate treatment
- Applying survival techniques when in a survival craft
- Operating survival radio equipment
- Recognising fire hazards on a vessel and taking appropriate action to report and minimise them
- Determining the type and extent of a fire and taking appropriate action
- Operating emergency shut-offs
- Using portable fire extinguishers
- Operating fixed installation extinguishing systems
- Operating fire hoses, branches, nozzles and fire pumps
- Conducting effective boundary cooling
- Using water spray as an effective fire fighting agent

- Reading and interpreting instructions on emergency procedures, the use of lifesaving and survival equipment and fire fighting equipment

Numeracy skills used for:

- Carrying out calculations involved in rationing food and water

Critical aspects of competence

Assessment must confirm the ability to:

- Operate and use the various types of survival equipment found on a vessel
- Participate in abandon vessel musters and drills
- Apply correct survival techniques in the event of vessel abandonment
- Participate in on-board fire fighting activities
- Operate the various types fire fighting equipment found on a vessel

Assessment must confirm knowledge of:

- Procedures for emergency response on board vessels
- Survival appliances and survival craft found on vessels
- Procedures for survival once the vessel is abandoned
- The chemistry of fire
- Principles underlying the spread of fire and its extinguishment

- Different classes of fire, their characteristics and strategies and equipment needed for their extinguishment

Context of assessment

Assessment should be conducted in a controlled, simulated environment.

Method of assessment

The following assessment methods are suggested:

- Practical exercises involving the observation of the candidate conducting a variety of simulated survival at sea and fire fighting exercises
- Written or oral short answer questions to assess underpinning knowledge

Interdependent assessment of units

This unit is likely to be assessed independently and will require access to a pool or enclosed area of water for survival assessment and a safe area to light and extinguish fires

Resources required for assessment

Resources may include:

- Life raft
- Life saving equipment (life jackets, flares, EPIRB etc)
- Fire fighting equipment (portable extinguishers, fire hoses, safety clothes etc)