Maritime & Coastguard Agency

INSTRUCTIONS FOR THE GUIDANCE OF SURVEYORS ON

DRILLS, PREVENTION OF MAN OVERBOARD AND MUSTERS

MSIS27 CHAPTER 11

Rev 10.22

PREFACE

0.1 These Marine Survey Instructions for the Guidance of Surveyors (MSIS) are not legal requirements in themselves. They may refer to statutory requirements elsewhere. They do represent the MCA policy for MCA surveyors to follow.

0.2 If for reasons of practicality, for instance, these cannot be followed then the surveyor must seek at least an equivalent arrangement, based on information from the owner/operator. Whenever possible guidance should be sought from either Principal Consultant Surveyors or Survey Operation Branch, in order to maintain consistency between Marine Offices.

Technical Services Ship Standards
Bay 2/22, Spring Place
105 Commercial Road
Southampton
SO15 1EG

RECENT AMENDMENTS

The amendments made in the most recent publication are shown below, amendments made in previous publications are shown in the document Amendment History.

Version Number	Status / Change	Date	Author Reviewer	Content Approver	Next Review Date/Expiry Date
03.21	• Revision to section on personal floatation devices.	05/03/21	I Platts	G Stone	05/03/23
09.21	• Revision of references to MSN1871 Amendment No.2 • Update to plans and procedures an owner/skipper should have in place to deal with Man overboard • Update to PFD performance requirements to prohibit devices with secondary donning action and guidance on crotch strap checks	30/06/21	D Fenner/I Platts	G Stone	06/09/23
10.22	• Delete references to MSN719, MSN1303 and MSN1314	21/10/22	D Fenner	G Stone	06/09/24

Main Contents

11.1 STATUTORY PROVISIONS;

11.1.1 The relevant regulations and requirements are set out at the beginning of each section. The guidance should also be applied, as far as practical.

11.1.2 The principal statutory provisions concerning Fishing Vessel Musters and Drills are contained in:

- The Merchant Shipping (Crew Agreements, Lists of Crew and Discharge of Seamen) (Fishing Vessels) Regulations 1972 SI No 919, as amended by:
  - S.I. 1983 No. 478,
  - S.I. 1979 No. 1519; and
  - S.I. 2018 No. 1109
- The Fishing Vessels (Codes of Practice) Regulations 2017 No.943
- The Merchant Shipping (Official Log Books) (Fishing Vessels) Regulations 1981 SI No 570, as amended by:
  - S.I. 2002 No. 1473.
- The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997 SI 2962, as amended by:
  - S.I. 1998 No. 2411;
  - S.I. 2001 No. 54;
  - S.I 2014 No. 1616;
  - S.I. 2015 No. 21;
  - S.I 2015 No. 1692;
  - S.I. 2016 No 1026; and
  - S.I. 2108 No 1109

11.2 SUPPLEMENTARY INFORMATION;

11.2.1 Supplementary guidance, instructions and information for Fishing Vessels is contained in current Merchant Shipping Notices (MSNs), Marine Guidance Notes (MGNs) and Marine Information Notes (MINs) and Surveyor Advice Notes (SANs), previously Operational Advice Notices (OANs). Those currently are relevant:

- ~~MSN 719 Guide to the fishing industry on documents required by law to be maintained;~~
- ~~MSN 1303 Guide to the fishing industry on documents required by law to be maintained: vessels of 55 feet (16.8 metres) or more in length but less than 80 feet (24.4 metres);~~
- ~~MSN 1314 Guide to the fishing industry on documents required by law to be maintained: vessels of 80 feet (24.4 metres) or more in length;~~
- MSN 1871 (F) - The Fishing Vessels Code of Practice for the Safety of Fishing Vessels of less than 15m Length Overall;
- MSN 1872 (F) – The Code of Safe Working Practice for the Construction and Use of 15 Metre (LOA) to less than 24m (L) Fishing Vessels;

- MSN 1873 (F) – The Code of Safe Working Practice for the Construction and Operation of Fishing Vessels of 24m Registered Length and Over;
- MSN 1891: International Labour Organisation Work in Fishing Convention (No.188) – List of Crew
- MGN 123 (M+F) - Certificates of Discharge;
- MGN 570 – Emergency Drills
- MGN 571 – Prevention of Man Overboard;
- MGN 587 (F) – International Labour Organisation Convention (No.188): Health and Safety: Responsibilities of Fishing Vessel Owners, Managers, Skippers and Fishermen;
- MGN 588 (F) – Compulsory Provision and wearing of Personal Floatation Devices on Fishing Vessels

11.3 DRILLS

11.3.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.3.2 Regular drills are essential to the safe running any vessel. In Fishing Vessels regular drills should be completed for all size vessels.

11.3.3 The surveyors' role is that of witness and he will not take part in the test. The surveyor should be satisfied that the vessels crew are competent and the equipment is adequately prepared to carry out the drill.

11.3.4 Prior to commencement of the drill, the surveyor will liaise with the owner (or responsible person in charge of the test) to ensure that the test is appropriately planned and any additional equipment required to witness the test is provided.

11.3.5 For all FVs, surveyors should check that drills have been completed and at Intermediate and Renewal surveys Surveyors should witness drills. If there is no evidence that drills have taken place, or drills are unsatisfactory, then this should be recorded on the vessel's Report of Inspection/Survey as a deficiency and detention or prohibition from sailing considered.

11.3.6 Ideally, witnessing of drills is best done when the vessel is underway; the crew are then focused on completing the drill and with the vessel underway the scenario is more realistic. Alongside drills are acceptable if it is not practicable for the vessel to put to sea, in which case the drill should be carried out in as near sea going condition as possible. Surveyors should ensure if drills are witnessed at sea that they witness only, and that it is made very clear to the owner/ skipper that the vessel remains under their command and control at all times. On completion of drills Surveyors should provide a comprehensive debrief and ensure that a record of drills is made in the vessel's Log and in the survey record (1602/3). If the drills are unsatisfactory, for example the crew do not perform the drill competently or equipment is not adequately prepared, vessels this should also be recorded on

the vessel's Report of Inspection/Survey as a deficiency and detention or prohibition from sailing considered.

11.3.7 The drills referred to above should ensure that the crew thoroughly understand and are exercised in the duties which they have to perform with respect to the handling and operation of all life-saving, fire fighting and survival equipment. Flooding drills should also be incorporated.

11.3.8 15 – 24m FVs; MSN 1872 (Chapter 8) requires that the skipper should ensure that the crew are trained in the use of all lifesaving and fire appliances and equipment with which the vessel is provided and should ensure that all members of the crew know where the equipment is stowed. Such training should be carried out in drills, held in port or at sea, at intervals of not more than one month. The times, dates and particulars of inspections and drills should be recorded and available for future inspection. The place for this is in the vessel's log, and surveyors should check to see if monthly entries have been made.

11.3.9 Over 24m FVs; MSN 1873 (Chapter 8) requires that each member of the crew must participate in at least one abandon ship and one fire drill every month. There is also an onus on the FVs administration to ensure such drills take place; Chapter 8, Paragraph 8.2.2.5 states

> MCA shall take such measures as it may deem necessary to ensure that crews are adequately trained in their duties in the event of emergencies.

11.3.10 The times, dates and particulars of inspections and drills should be recorded and available for future inspection. For vessels required to have a log book, the place for this is in the vessel's log, and surveyors should check to see if monthly entries have been made. For vessels not required to have log book, the owner should provide evidence on the time date and type of drill in a suitable format.

11.3.11 Under 15m LOA FVs; MSN 1871 (Chapter 8) requires that the skipper should ensure that the crew are trained in the use of all lifesaving and fire appliances and equipment with which the vessel is provided and should ensure that all members of the crew know where the equipment is stowed. Such training should be carried out in drills, held in port or at sea, at intervals of not more than one month. The times, dates and particulars of inspections and drills should be recorded and available for future inspection. The place for this is in the vessel's log, and surveyors should check to see if monthly entries have been made.

11.3.12 The drills referred to above should ensure that the crew thoroughly understand and are exercised in the duties which they have to perform with respect to the handling and operation of all life-saving, fire fighting and survival equipment. Flooding drills should also be incorporated.

11.4 General Guidance for the Conduct of Drills (Crewed Vessels)

11.4.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.4.2 The following is guidance for drills witnessed during Inspections and Surveys.

11.4.3 The emergency drill could take the form of:-

- Man Overboard,
- Hull damage/taking water/sinking,
- Fire, Engine Room, Accommodation or Factory Deck Fire
- Collision/Grounding,
- Muster and Abandon Ship
- Emergency Anchoring;

11.4.4 At least two drills should be undertaken, with one always being a Man Overboard Drill.

11.4.5 The drill should refresh basic safety training and add an element of reality of working as part of a team onboard their own vessel. In witnessing a safe and effective drill, it is important that as many of the regular crew are present as possible. Drills cannot replace the written risk assessment but are a vital part of the necessary control measures. It is essential that all crew members undertake drills and play their part in the safe day to day running of the vessel.

11.5 ANCHOR DRILL

11.5.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.5.2 PURPOSE

11.5.2.1 If practicable, the vessel will proceed from the harbour or dock to a safe anchorage position where an anchoring drill will be carried out. The crew will demonstrate that the vessel can safely deploy and recover an anchor within a reasonable time to simulate an emergency anchoring scenario. The crew will demonstrate the deployment of the anchor, dressed suitably including gloves and correctly donned life jackets.

11.5.3 SUGGESTED SCENARIO

11.5.3.1 The vessels steering gear has failed in the fairway into a busy harbour. Bring the vessel to anchor and show the correct day signal.

11.5.3.2 The drill should include:

- Crew dressed in PPE;
- Anchor handling and methodology safe;
- Anchor cable marked to show length of cable deployed;
- Crew aware of length of cable remaining onboard;
- Communication between wheelhouse and anchor party acceptable; and

- Anchor deployed safely and operation acceptable

11.6 FIRE DRILL

11.6.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.6.2 PURPOSE

11.6.2.1 To demonstrate:

- knowledge of ship board equipment and vents;
- donning and use of breathing equipment;
- practical use of hoses and nozzles;
- safe and effective fire-fighting techniques are employed;
- safe and effective techniques used when considering rescue of crew: and
- use of fixed fire suppression gas systems.

11.6.2.2 During this fire drill the main fire fighting hoses will be deployed and demonstrated. Once the surveyor is satisfied that the condition of the hoses and nozzles are to standard then the vessel will simulate “dead ship” and the emergency fire hose and equipment will be tested.

11.6.3 SUGGESTED SCENARIO

11.6.3.1 Fire reported in area of high fire risk e.g. engine room, galley or spaces with electrical heaters. Prepare to fight the fire and prevent the fire from spreading to other areas of the vessel.

11.6.3.2 The drill should include:

- Knowledge of shipboard equipment good;
- All vents and quick closing fuel tank valves closed, fans stopped and remote engine stops operated;
- Fire mains and hoses proved;
- Emergency pumps and hoses proved;
- Breathing equipment and safety procedures acceptable;
- Use of gas suppression systems understood and appreciated; and
- Limitations of fire fighting equipment carried appreciated.

11.6.3.3 The skipper and crew should demonstrate awareness of:

- how to respond to fuel stops activating
- how to communicate effectively with each other

- the correct procedure to alert CG
- muster stations
- the most suitable place to store lifejackets
- how/where to access lifejackets quickly
- how to don lifejackets
- where LSA is
- how to deploy LSA
- how to release and operate liferafts/ rescue boats
- where Firefighting equipment is
- how to deploy Fire-fighting equipment
- what fire equipment to use and when
- how to don firefighting outfit
- how to use Breathing apparatus
- how to ensure compartments are clear before CO2 used

11.7 MAN OVERBOARD DRILL

11.7.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; in MGN 570; and in MGN 571.

11.7.2 PURPOSE

11.7.2.1 To ensure the crew are able to quickly and safely launch the rescue boat/ man overboard recovery system to recover a person from the water. The recovery crew should be aware of the effects of hydrostatic squeeze and how it will affect a casualty suffering from hypothermia. The recovery operation should be based on an unconscious person. See also section 11.18.27. The crew should be practised in the use of any equipment and knowledgeable of the four stages of the human body's typical reaction to immersion in cold water (under 15°C).

11.7.3 SUGGESTED SCENARIO

11.7.3.1 A member of the crew is believed to fallen overboard and has not been seen for some time. Surveyor will indicate when this crew man was last seen and if the crewman was seen to have fallen overboard. If a rescue boat is carried this should be used for recovery, if not then an alternative means of recovering a man from the water should be used.

11.7.3.2 RESCUE BOAT

11.7.3.3 The crew will undertake a "man overboard" drill and will launch and man the rescue boat. The rescue boat will be readied and swung out to a side specified by the attending surveyor and launched into the water in a safe and controlled manner.

11.7.3.4 The drill should include;

- Rescue boat stores to scale and serviceable;
- Rescue boat launched in safe manner, crew suitably dressed;
- Rescue boat in serviceable condition;
- Search undertaken of vessel for missing crew member.

11.7.3.5 On completion of this drill the rescue boat will be recovered to the vessel and readied for immediate use.

11.7.3.6 MAN OVERBOARD RECOVERY SYSTEM

11.7.3.7 Crews should be well trained in the use of these systems and appreciate the limitations of the use of these recovery systems.

11.7.3.8 The drill should include:

- System inspected and serviced;
- Crew well trained in the use of the system carried;
- System deployed correctly;
- First aid requirements anticipated; and
- System re-stowed and readied for immediate use.

11.7.3.9 SKIPPER/CREW AWARENESS

11.7.3.10 The crew/skipper should be able to demonstrate awareness of:

- how to maintain awareness of MOB location
- how to activate light/smoke float
- why a light/smoke float will assist
- how to search vessel effectively
- muster stations
- the most suitable place to store lifejackets
- how/where to access lifejackets quickly
- how to don lifejackets
- the correct procedures for contacting the coastguard
- how to release and deploy liferaft/ rescue boat
- how to recover crew using MOB systems on board
- the limitations of the MOB systems
- what first aid requirements to anticipate

11.8 ABANDON SHIP DRILL

11.8.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.8.2 The crew alarm will be activated and the crew will go to muster stations dressed appropriately to abandon ship, with warm clothing and life jackets correctly donned.

11.8.3 PURPOSE

11.8.3.1 The crew will demonstrate that they are aware of their personal muster station, can don a lifejacket quickly and correctly. Crew members allocated to the lifeboat or liferaft deck will demonstrate they can prepare a liferaft for manual launching. Crew responsible for other duties will undertake those duties in a quick and competent manner.

11.8.3.2 The drill should include:

- Crew alarm activated and suitable;
- Crew to correct muster stations;
- Crew suitably dressed in warm clothing and lifejackets;
- Life Rafts made ready for deployment;
- Duties as posted on Muster List completed; and
- Stowage of life Jackets, Risks understood and acceptable.

11.8.3.3 The crew will be accounted for and a report made to the skipper.

11.8.3.4 Liferafts will be “made ready” to deploy manually but will not be deployed.

11.8.3.5 If Rescue Boats are fitted, these should also be made ready for deployment.

11.8.3.6 SKIPPER/CREW AWARENESS

11.8.3.7 The Skipper/crew should be able to demonstrate:

- awareness of muster station
- the most suitable place to store lifejackets
- how/where to access lifejackets quickly
- how to don lifejackets
- suitable clothing
- correct procedure to alert CG
- how to release and deploy a liferaft/rescue boat
- where to make fast a painter
- how to pull a painter
- how to board a liferaft/rescue boat
- how to activate EPIRBs/SARTs/PLBs

11.9 HULL DAMAGE/TAKING ON WATER/SINKING

11.9.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.9.2 To deal with a vessel with hull damage, taking on water or sinking, the skipper should demonstrate the following actions:

- Sound the alarm
- Checking for water ingress
- Early notification of distress
- Preparations to fight flooding
- Timely preparation of LSA
- Consideration of Abandon ship

11.9.3 SKIPPER/CREW AWARENESS

11.9.4 The skipper/crew should demonstrate awareness of:

- Muster station
- the most suitable place to store lifejacket
- how/where to access lifejacket quickly
- how to don lifejacket
- suitable clothing
- how to check alarms
- methods for stopping water ingress
- how to take tank soundings
- correct procedure to alert CG
- bilge pump capabilities
- how to operate bilge pumps
- conducting effective communications with the skipper
- how to use damage control kit
- how to release and deploy liferaft
- where oils and fuel vents are and how to close them

11.10 COLLISION/GROUNDING

11.10.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.10.2 To deal with a vessel with hull damage, taking on water or sinking, the skipper should able to demonstrate the following actions:

- Sound the Alarm
- Check for damage
- Early notification of distress

- Preparation to fight flooding
- Timely preparation of LSA
- Identify route to safety
- Consider anchors to stop going further aground
- How to reduce the weight of the vessel to decrease draught
- If cannot refloat, or damage too great, to remain grounded.

11.10.3 **Skipper/Crew Awareness**

11.10.4 The skipper/crew should demonstrate awareness of:

- Muster station
- the most suitable place to store lifejacket
- how/where to access lifejacket quickly
- how to don lifejacket
- what clothing is suitable
- how to conduct a check of the vessel
- methods for stopping water ingress
- in a collision, how to check on the other vessel's condition
- correct procedure to alert CG
- how to stop electrical power
- location of seacocks and how to turn off
- bilge pump capabilities
- how to operate bilge pumps
- how to conduct effective communications with the skipper
- how to release/deploy a liferaft for launching
- how to use Nav Aids
- how to deploy anchors
- appropriate PPE for anchor deployment
- lengths of cable deployed
- how to deploy anchor safely
- communication between the wheelhouse and anchor party
- what could be taken off vessel to decrease weight

11.11 GENERAL GUIDANCE FOR THE CONDUCT OF DRILLS (SINGLE HANDED VESSELS)

11.11.1 Requirements are contained in MSN 1871, Chapter 8 and in MGN 570.

11.11.2 The following is guidance for drills witnessed during Inspections and Surveys.

11.11.3 The emergency drill could take the form of:-

- Man Overboard; and

- Abandon ship
- Fire
- Hull Damage/Taking on Water/Sinking
- Collision/Guidance

11.11.4 At least two drills should be conducted, at least one of which should always be a Man Overboard Drill.

11.11.5 The drill should refresh basic safety training and add an element of reality of working onboard their own vessel. Drills cannot replace the written risk assessment but are a vital part of the necessary control measures.

11.12 ABANDON SHIP (SINGLE HANDED)

11.12.1 Requirements are contained in MSN 1871, Chapter 8 and MGN 570.

11.12.2 The Skipper should demonstrate the following actions.

- Mayday
- Put on all warm clothing / waterproofs
- Don Lifejacket
- Collect all relevant LSA (Flares, Hand held radio, PLB, Torch etc.)
- If fitted with Liferaft / EPIRB make ready for use.
- If time allows confirm abandoning vessel by VHF

11.12.3 SKIPPER AWARENESS

11.12.4 The Skipper should be able to demonstrate awareness (where applicable) of:

- the most suitable place to store lifejacket
- how/where to access lifejacket quickly
- how to don lifejacket
- suitable clothing
- correct procedure to alert CG
- how to release and deploy a liferaft
- where to make fast a painter
- how to pull a painter
- how to board a liferaft
- how to activate EPIRBs/SARTs/PLBs

11.13 MAN OVERBOARD: RESCUE OF CASUALTY FROM WATER. (SINGLE HANDED)

11.13.1 Requirements are contained in MSN 1871, Chapter 8; in MGN 570; and MGN 571.

11.13.2 To rescue a casualty who has fallen overboard from another vessel, the Skipper should be able to demonstrate awareness of:

- Life ring deployment (to mark casualty position)
- Mayday Relay
- Get alongside casualty
- Attempt recovery if equipped, or
- Try to keep casualties airway clear until rescue - if safe to do so.

11.13.3 **Skipper Awareness**

11.13.4 The Skipper should be able to demonstrate awareness of:

- how to maintain awareness of MOB location
- how to activate light/smoke float
- why a light/smoke float will assist
- aware of correct procedure to alert CG
- how to release and deploy liferaft
- how to recover crew using MOB systems on board
- the limitations of the MOB systems
- what first aid requirements to anticipate

11.14 FIRE (SINGLE HANDED)

11.14.1 Requirements are contained in MSN 1871, Chapter 8 and MGN 570.

11.14.2 The Skipper should demonstrate the following actions (where applicable):

- knowledge of ship board equipment and vents;
- donning and use of breathing equipment (if applicable);
- practical use of hoses and nozzles;
- safe and effective fire-fighting techniques are employed; and
- use of fixed fire suppression gas systems.

11.14.3 During this fire drill the main fire-fighting hoses will be deployed and demonstrated. Once the surveyor is satisfied that the condition of the hoses and nozzles are to standard then the vessel will simulate “dead ship” and the emergency lights, fire hoses and equipment will be tested.

11.14.4 SCENARIO

11.14.5 Fire reported in area of high fire risk e.g. engine room, galley or spaces with electrical heaters. Prepare to fight the fire and prevent the fire from spreading to other areas of the vessel.

11.14.6 **KEY ISSUES**

11.14.7 The key issues are:

- knowledge of shipboard fire-fighting equipment;
- all vents closed and fans stopped;
- fire mains and hoses proved;
- emergency pumps and hoses proved;
- breathing equipment and safety procedures acceptable;
- use of gas suppression systems understood and appreciated; and
- limitations of fire-fighting equipment carried appreciated.

11.14.8 The skipper should be able to demonstrate awareness (where applicable) of:

- how to respond to fuel stops activating
- correct procedure to alert CG
- the most suitable place to store lifejacket
- how/where to access lifejackets quickly
- how to don lifejacket
- where LSA is
- how to deploy LSA
- how to release and operate liferaft
- where Firefighting equipment is
- how to deploy Fire-fighting equipment
- what fire-equipment to use and when
- how to don fire-fighting outfit
- how to use Breathing apparatus

11.15 HULL DAMAGE/TAKING WATER/SINKING (SINGLE HANDED)

11.15.1 Requirements are contained in MSN 1871, Chapter 8 and MGN 570.

11.15.2 To deal with a vessel with hull damage, taking on water or sinking, the skipper should demonstrate the following actions:

- Preparing for an emergency
- Checking for water ingress
- Early notification of distress
- Preparations to fight flooding
- Timely preparation of LSA
- Consideration of Abandon ship

11.15.3 SKIPPER AWARENESS

11.15.4 The skipper should demonstrate awareness of:

- the most suitable place to store lifejacket
- how/where to access lifejacket quickly
- how to don lifejacket
- suitable clothing
- how to check alarms
- methods for stopping water ingress
- how to take tank soundings
- correct procedure to alert CG
- bilge pump capabilities
- how to operate bilge pumps
- how to use damage control kit
- how to release and deploy liferaft
- where oils and fuel vents are and how to close them

11.16 COLLISION/GROUNDING (SINGLE HANDED)

11.16.1 Requirements are contained in MSN 1871, Chapter 8 and MGN 570.

11.16.2 To deal with a vessel with hull damage, taking on water or sinking, the skipper should able to demonstrate the following actions:

- Prepare for Emergency
- Check for damage
- Early notification of distress
- Preparation to fight flooding
- Timely preparation of LSA
- Identify route to safety
- Consider anchors to stop going further aground
- How to reduce the weight of the vessel to decrease draught
- If cannot refloat, or damage too great, to remain grounded.

11.16.3 SKIPPER AWARENESS

11.16.4 The skipper should demonstrate awareness of:

- the most suitable place to store lifejacket
- how/where to access lifejacket quickly
- how to don lifejacket
- what clothing is suitable

- how to conduct a check of the vessel
- methods for stopping water ingress
- in a collision, how to check on the other vessel's condition
- correct procedure to alert CG
- how to stop electrical power
- location of seacocks and how to turn off
- bilge pump capabilities
- how to operate bilge pumps
- how to release/deploy a liferaft for launching
- how to use Nav Aids
- how to deploy anchors
- appropriate PPE for anchor deployment
- lengths of cable deployed
- how to deploy anchor safely
- what could be taken off vessel to decrease weight

11.17 PREVENTION OF MAN OVERBOARD

11.17.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; in MGN 570; and in MGN 571.

11.17.2 MAIB have commented positively on the observed benefits from a previous MCA campaign on emergency drills. To continue to address these Man Overboard incidents surveyors attending fishing vessels of all sizes for any survey or inspection, should always address man-overboard prevention as well as recovery when assessing emergency preparedness.

11.17.3 The primary solution to man-overboard recovery is to identify hazards by an in-depth assessment of any work activity then redesign the process to eliminate them or apply control measures to reduce the risk.

11.17.4 To assist the following documents have been produced to assist a discussion with the skipper and crew and to leave with the vessel:

1. Man Overboard Risk Review (electronic).pdf;

This document has been prepared by industry to assist recording the identification of hazards and the mitigating actions to be taken to reduce risk. (See Annex A)

2. The MCA Publication "Fishermen's Safety Guide: A guide to safe working practices and emergency procedures for fishermen" available from

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/553544/sept__16_Fishermans_Safety_Guide.pdf

11.17.5 The aim of the discussion regarding prevention of man overboard should be the following:

- To prove continuous perception of the risks in involved in fishing operations
- To prevent a person from falling overboard.
- To reduce any danger to the rescuers.
- To increase the chances of a successful rescue.

11.17.6 Crewmembers should always be on guard against falling overboard as it is a major cause of fatalities, Falling overboard is always likely to result in DEATH due to cold water shock and limited survival time in the sea. The pitch and roll of small vessels, the sudden accelerations, the conducting of complex fishing operations in exposed areas, the frequent hauling in and letting out of gear over the side or stern, the working on wet slippery decks and the inevitable fatigue which results from long working hours, are conditions which cause fatalities of crew falling overboard.

11.17.7 When work is carried out where there is a risk of falling down or falling overboard, or when work is carried out in an exposed area in adverse weather, and the risk of going overboard cannot be eliminated, a safety harness with a safety line attached must be used or a PFD worn. The length of the safety line should be adjusted to prevent falling overboard.

11.17.8 The skipper should ensure that when a fishing vessel is under way, any work that would require a crewmember to lean over the side should only be undertaken in cases of emergency.

11.17.9 Should such work be necessary, the person required to work over the side must wear a safety harness and be secured to the vessel with at least one other person in close attendance or a PFD worn. In the event of a vessel with only one crewmember and that person has to lean over the side while the vessel is under way, the safety harness worn by the person shall be attached to the vessel. There should also be an appropriate arrangement for the engine to be stopped should the person fall overboard.

11.18 PREVENT FISHERMEN FALLING OVERBOARD.

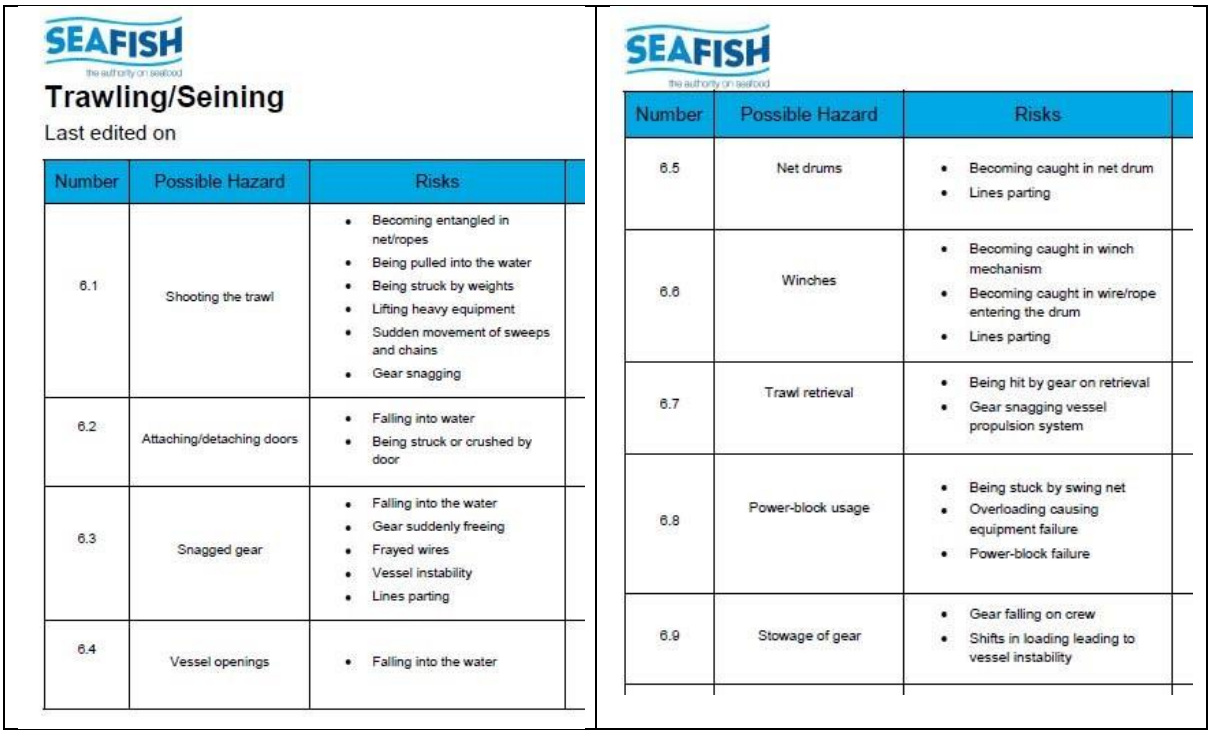
11.18.1 Requirements are contained in MSN 1871, Chapter 8; MSN 1872, Chapter 8, section 8.1; MSN 1873, Chapter 8, section 8.2; in MGN 570; and in MGN 571.

11.18.2 ACTION 1: IDENTIFY AREAS WHERE REGULAR WORK ACTIVITY TAKES PLACE WITHIN ONE METRE OF THE DECK EDGE. (SEE ANNEX A)

11.18.3 Surveyors will check that there is a risk assessment which identifies work activities which bring fishermen within one metre of an area of risk such as from a fall or of moving equipment.

11.18.4 The location of each crew member during high risk activities, such as shooting and hauling, is to be identified on a general arrangement of the vessel as can be found in the Stability Information book.

11.18.5 For reference example areas to be checked can be found in the standard risk assessment folder.



SEAFISH
the authority on seafood

Trawling/Seining

Last edited on

Number	Possible Hazard	Risks
6.1	Shooting the trawl	• Becoming entangled in net/ropes • Being pulled into the water • Being struck by weights • Lifting heavy equipment • Sudden movement of sweeps and chains • Gear snagging
6.2	Attaching/detaching doors	• Falling into water • Being struck or crushed by door
6.3	Snagged gear	• Falling into the water • Gear suddenly freeing • Frayed wires • Vessel instability • Lines parting
6.4	Vessel openings	• Falling into the water

SEAFISH
the authority on seafood

Number	Possible Hazard	Risks
6.5	Net drums	• Becoming caught in net drum • Lines parting
6.6	Winches	• Becoming caught in winch mechanism • Becoming caught in wire/rope entering the drum • Lines parting
6.7	Trawl retrieval	• Being hit by gear on retrieval • Gear snagging vessel propulsion system
6.8	Power-block usage	• Being stuck by swing net • Overloading causing equipment failure • Power-block failure
6.9	Stowage of gear	• Gear falling on crew • Shifts in loading leading to vessel instability

11.18.6 Work activity relating to hauling, shooting or repairing gear to be particularly examined.

11.18.7 Decks and working areas, as well as, horizontal surfaces in the vicinity of ladders and doorways should be provided with anti-skid surfaces and kept clear of all loose gear liable to cause tripping.

11.18.8 To prevent slipping, decks and working places should be kept clean of oil and fish debris.

11.18.9 Should it be necessary for fishermen to climb on rails, etc. while fishing or performing work on nets, precautions should be taken for their safety. Safety harnesses or safety lines must be worn. It is preferable that the work activity be re-designed to eliminate the need to climb on rails.

11.18.10 If the Risk Assessment does not describe measures to eliminate the risk of going overboard, then it should set out whether a safety harness or PFD is to be worn. If Risk measures are described, then these measures should be checked.

11.18.11 ACTION 2: IDENTIFY EACH WORK ACTIVITY AND HOW IT CAN BE CHANGED TO REDUCE RISK.

11.18.12 HOW: STEPS OF SAFETY ASSESSMENT

11.18.13 The steps of a safety assessment which should be discussed with the skipper and crew are:

11.18.14 Step 1: Identification of hazards

11.18.15 Hazards should be identified and noted. This should be done with the involvement of all members of the crew. It may also be helped by taking into account information on known hazards provided by the competent authority or other credible sources e.g. MAIB Reports.

11.18.16 Step 2: Assessment of hazards/determination of risk

11.18.17 In this step, the objective is to determine those hazards that may cause a man to go overboard. Consideration might also be given to the likelihood of an accident as a result of this hazard. This will help the crew to establish the priority for taking action. It may be useful to use a simple means of assigning levels of importance and frequency to the risk.

11.18.18 Step 3: Taking action/exercising control

11.18.19 Eliminate the hazard - The aim should be to eliminate significant hazards. An example would be to remove work activity from the deck edge.

11.18.20 Isolate the hazard - If it is not possible to eliminate a hazard completely, it should be isolated in order to separate crewmembers from the danger. For example, this could mean putting guards around moving parts.

11.18.21 Minimize the risk - If it is not possible to eliminate or isolate the hazard, action should be taken to minimize the possibility that it will cause harm or, at least, to reduce the harm caused. For example, this could be done by providing protective clothing and equipment. It may also call for training, including on-board training, and a discussion of how to improve procedures to improve their safety. The involvement of the crew is **CRUCIAL** in this part of the process: (1) the person closest to the operation may be in the best position to find solutions; (2) a discussion of the problem and potential solutions will be enhanced by having the benefit of the ideas of several persons; (3) this will contribute to the building a “safety culture” on the vessel.

11.18.22 Step 4 - Review of the hazard

11.18.23 The process of safety assessment and management is **continuous**. As noted above, the hazards will vary with each vessel. Furthermore, the hazards will change on that vessel when conditions change. For example, if the type of fishing operation changes, if there is a change in the crew, if a new piece of equipment is installed, this may, and probably will, change at least some of the hazards on

board and perhaps also the risks associated with those hazards. Therefore, the hazards, the risks involved, and the action to be taken should be reviewed, in whole or in part, when conditions change. It is also advisable that they be reviewed on a periodic basis.

11.18.24 Some suggested areas for detail examination are included in Annex B.

11.18.25 Guidance on what can be done to the vessel to prevent crew, including those on single handed vessels, falling overboard. e.g. guard rails can be found at Annex B.

11.18.26 **In discussing recovery equipment** some of the options for selecting equipment for recovery of a person from the water should be discussed with the skipper and crew. This does not constitute an endorsement of any product nor is it a complete list but is used for illustrative and discussion purposes only.

11.18.27 In assessing the equipment owners have selected the owners should demonstrate:

1. They have developed a plan for recovery of a conscious person.

2. They have developed a plan for recovery of a unconscious person.

3. There shall be a means to take hold of a person (conscious or unconscious) when alongside.

4. The position of the lifebuoy shall be positioned near to the place where the chances of falling overboard are the highest.

5. the owner or skipper know how to use the equipment you have on board? Have they practiced using it?

6. the owner or skipper are doing man overboard drills to familiarise the crew with the procedures? Does the skipper know what to do in each of the different modes of operation. The MoB recovery procedure shall consider:

   a. Recovery when underway i.e. no gear down;
   b. Recovery when gear is fully deployed;
   c. Recovery when gear is against the vessel / being brought alongside.

   In each of the above cases, the owner shall ensure that the skipper is aware of what he is to do and the action that he is required to take.

   The owner shall ensure that the skipper is aware of the immediate actions to take whether it is in terms of manoeuvring the vessel and time of response, bringing the gear onto the vessel, letting go of the gear and the time that it takes to undertake both activities.

   If the vessel cannot begin to deploy MoB equipment sufficient to undertake an effective rescue within a maximum period of 5 minutes then the owner shall consider alternative arrangements even if that prevents the vessel from sailing until

7. Has the plan and procedures for recovering the casualty been written down for the benefit of the crew? In each of the above cases, the owner shall ensure that the crew is aware of what they are to do and the action that they are required to take.

8. they are actively supporting the crew to wear PFDs at all times?

9. If working single handed can they get yourself back on board?

11.19 PFD ACCEPTABLE PERFORMANCE LEVELS AND WAISTBELT PFDS

11.19.1 Requirements are contained in MSN 1870; MSN 1871, Chapter 7; MSN 1872, Chapter 7, MSN 1873, Chapter 7; and MGN 588.

a) Lifejackets for seagoing ships in accordance with ISO 12402-1 are intended primarily for use on seagoing ships under IMO rules.

b) PFD, performance level 275, in accordance with ISO 12402-2 are intended primarily for offshore use and by people who are using items of significant weight and thus require additional buoyancy. They are also of value to those who are using clothing which traps air and which will adversely affect the self-righting capacity of the lifejacket. They are designed to ensure that the user is floating with his mouth and nose clear of the surface at an angle and with sufficient freeboard to limit mouth immersions in waves.

Note: when fitted with emergency light and whistle can be counted as abandon ship lifejacket required by the code

c) PFD, performance level 150, in accordance with ISO 12402-3 are intended for general offshore and rough weather use where a high standard of performance is required. As tested, they will turn an unconscious person in swimming attire into a safe position. Additionally they should maintain a fully clothed person in a safe position with no subsequent action by the user.

11.20 MINIMUM ACCEPTED PERFORMANCE LEVELS FOR PFDS

11.20.1 The minimum performance level for automatically operating PFD or automatically inflated PFD or other inflatable devices is 150n.

11.20.2 PFD with secondary donning, such as those worn around the waist, are unlikely to meet the required performance levels. Furthermore as they usually require additional positioning, they are not acceptable given that the critical cold shock period occurs immediately on entering the water.

11.21 WEARING OF PFDS

11.21.1 PFDs must always be worn in accordance with Manufacturers instructions. For example, where the PFD requires it to be fitted with a crotch strap to meet the requirements of safe wear, surveyors should check that:

a. The crotch strap is in place and is in good condition;

b. The crotch strap is not tied up with tape, tie wraps or any other means which would indicate it is not being used;

11.21.2 Owners and crew should be reminded that:

a. the crotch strap is to be used whilst wearing the PFD, otherwise the PFD may not function correctly;

B. correct adjustment/fitting to suit the wearer is essential, every time the PFD is donned (especially if the PFD is used by other crew members).

11.22 OTHER TYPES OF PPE

11.22.1 MSNs 1871, 1872 and 1873 also states that a wearable buoyancy device of at least 50N that provides buoyancy in the water can be accepted on the basis of a risk assessment. The fishing vessel owner should familiarise themselves with the capabilities of PPE, and its limitations and select equipment appropriate to the risk. The risk review and reasons as to why a wearable buoyancy device of at least 50N provides equivalent levels of safety to the wearing of an inflatable PFD must be documented in the Risk Assessment.

7.5.1 In considering the Risk Assessment, the owner should have ensured they give special consideration should be given whether the PPE will:

a. turn an unconscious person over and keep their airways clear of the water;

b. keep the head clear of the water if the wearer suffers from the effects of cold water shock on entering the water;

c. require the wearer to expend additional effort to stay afloat with their head clear of the water, reducing the time available to effect a successful rescue.

11.23 MUSTERS

11.23.1 Requirements are contained in MSN 1871 Chapter 8; MSN 1872, Chapter 8, section 8.1.2; MSN 1873, Chapter 8, section 8.2; and in MGN 570.

11.23.2 All vessels should be provided with clear instructions for each crew member which shall be followed in case of emergency. For FVs 15m LOA and over, which carry 5 or more crew, a muster list should be provided with clear instructions for each member of the crew which should be followed in case of emergency.

11.24 MUSTER LIST

11.24.1 The muster list shall be posted up in several parts of the vessel and, in particular, in the wheelhouse, the engine room and in the crew accommodation and shall include the following information;

- Details of the general alarm signal, and
- The action to be taken by the crew when this alarm is sounded.

11.24.2 The muster list shall also specify how the order to abandon ship will be given. The muster list shall show the duties assigned to the different members of the crew including:

- closing of watertight doors, fire doors, valves, scuppers, overboard chutes, sidescuttles, skylights, portholes and other similar openings in the vessel;
- equipping the survival craft and other life saving appliances;
- preparation and launching of survival craft;
- general preparation of other life saving appliances;
- use of communication equipment; and
- manning of fire parties assigned to deal with fires.

11.24.3 The muster list shall specify which officers are assigned to ensure that the life saving and fire appliances are maintained in good condition and are ready for immediate use. The muster list shall specify substitutes for key persons who may become disabled, taking into account that different emergencies may call for different actions.

11.24.4 The muster list shall be prepared before the vessel proceeds to sea. After the muster list has been prepared, if any change takes place in the crew which necessitates an alteration in the muster list, the skipper shall either revise the list or prepare a new list.

11.25 MUSTER LISTS; PRACTICAL GUIDANCE ON COMPILATION

11.25.1 Muster lists should be planned around three stages when the emergency signal sounds.

11.25.2 STAGE 1 – INITIAL MUSTER

- Skipper and Mate to Muster Station 1 (Control position);
- Part of crew to Rescue Boat/ Liferaft Deck and ready LSA for deployment;
- Part of crew to alternative central area (e.g; Fish room Hatch) to await further orders; and
- All of crew get to a position where they can be accounted for, Skipper/mate ensure that all crew is present and that nobody is missing.

11.25.3 STAGE 2 – DEALING WITH THE INCIDENT

- Mate takes charge of **Emergency Party or Parties** as per direction in skippers standing orders and efforts are made to save the ship;
- In the case of a man overboard the mate will deploy lookouts and make arrangements for the recovery of the man in the water. First aid and warm dry clothing would also need to be made ready.

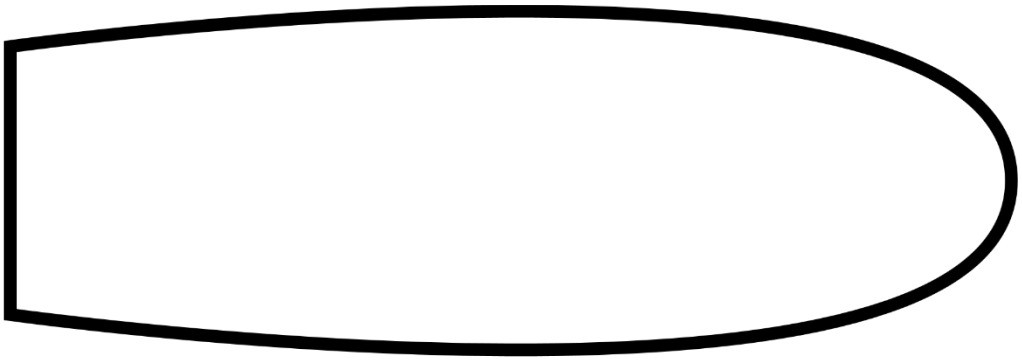
11.25.4 STAGE 3 – ABANDON SHIP (DECISION MADE BY SKIPPER)

- Rafts/ Rescue Boats are now deployed and boarded under the mate's direction preferably on the lee side of the vessel. Care should be taken in the case of fire or toxic fumes and the rafts should be deployed clear forward or aft of the vessel to avoid smoke, fumes and flames. Crew are to board life raft in orderly manner without entering water if possible the pilot ladder could be deployed to assist in boarding life rafts;
- Muster Lists should dictate who should take charge of each raft; and
- Muster lists should also delegate who should send Mayday signal and who should take a portable radio, first aid kit and EPIRB.

11.26 SAMPLE MUSTER LISTS

11.26.1 Sample muster list are at Annex D.

ANNEX A



Description of Risk Area / Process

1. Walk around the vessel and identify the locations where it would be possible for a MOB incident to occur. Remember to include how the vessel works at sea including the fishing operations.
2. Once found draw a link to the numbered boxes and write a short description of the risk including who is at risk of falling overboard.
3. Complete the second page to identify current and future measures that will reduce the risk to the minimum you can achieve.
4.
5.
6.

Number	Control Measures	PFD ON	Structural or procedural changes to be implemented
1			
2			
3			
4			
5			
6			

Mitigation

Where the risk of falling overboard has not been removed completely a PFD must be worn on this vessel.

Regular Drills and onboard training is part of the vessel's means of preventing and reacting to emergencies onboard.

ANNEX B

Guidance on what can be done to the vessel to prevent crew, including those on single handed vessels, falling overboard.

THIS GUIDANCE IS NOT INTENDED TO BE COMPREHENSIVE AND YOU SHOULD ASSESS THE RISKS FOR YOUR OWN VESSEL AND ACT ACCORDINGLY

Deck Surfaces

The surface of all decks shall be so designed or treated as to minimize the possibility of personnel slipping and falling overboard. In particular, decks of working areas, such as in machinery spaces, in galleys, at winches, around net and seine drums, and where fish is handled as well as at the foot and head of ladders and in front of doors, shall be provided with particularly effective anti-skid surfaces. (Wooden decks without anti-skid covering shall not be regarded as satisfying the requirements for anti-skid surfaces.)

Ropes and lines should be separated from where crew stand to avoid the risk of standing in a bight or inside a line under tension. Should problems occur with ropes and lines, vessels should have an agreed procedure and crew should not enter the area until it is safe to do so.

What to wear in areas of increased risk

When work is carried out or the crew move about in areas with a risk of going overboard cannot be eliminated, suitable safety measures must be taken, such as the use of lifelines or PFDs. The work should only be carried out if fully satisfactory surveillance has been established.

Removing the person from the area of risk

It should always be considered whether the task could be carried out in a way that removes the person from the area of risk, for example by conducting the task by mechanical means.

Leaning over the side of the vessel should be avoided at all costs, identify means that will remove the need to do this.

Bulwarks and Guardrails

Efficient bulwarks or guard rails shall be fitted on all exposed parts of the working deck and on superstructure decks if they are working platforms. The height of bulwarks or guard rails above deck shall be at least 1 m. There should be no gaps or lowpoints except when these are needed for operational reasons, and then they should only be open for the minimum time possible.

The minimum vertical distance from the deepest operating waterline to the lowest point of the top of the bulwark, or to the edge of the working deck if guard rails are fitted shall ensure adequate protection of the crew from water shipped on deck.

Clearance below the lowest course of guard rails shall not exceed 230 mm. Other courses shall not be more than 380 mm apart, and the distance between stanchions shall not be more than 1.5 m. In a vessel with rounded gunwales, guard rail supports shall be placed on the flat of the deck. Rails shall be free from sharp points, edges and corners and shall be of adequate strength.

Stern trawlers shall be provided with suitable protection such as doors, gates or nets at the top of the stern ramp at the same height as the adjacent bulwark or guard rails. When such protection is not in position a chain or other means of protection shall be provided across the ramp.

For other trawlers, the aft bulwarks may be omitted provided that the vertical distance from the deepest operating waterline to the edge of the working deck is at least 1800 mm and offers adequate protection of the crew from water shipped on deck, that there is a continuous gunwale from the starboard to the port side at a maximum height of 1000 mm, and that the other safety measures are in each individual case. Such safety measures shall not be limited to, but may consist of, for example:

- The distance from the net hauling equipment to the gunwale being at least 1000 mm;
- the width of the hole in the bulwark being minimized as much as possible through the insertion of moveable bars with a mutual distance of maximum 400 mm or pound boards of sufficient strength to resist the sea;
- an edge with a height of at least 50 mm being provided in the hole against the vessel's side or the like, or herringbones (flat bars with a length of at least 5 mm with an angle of 45 degrees to the side astern) being welded on covering at least 500 mm from the vessel's side astern against the net hauling equipment; the deck between drums and gunwale being extraordinarily non-skid.

When gear is not being launched or hauled in through the hole, three chains or wires shall be placed from the port side to the starboard side with solid fastenings in the side as well as where there is a fixed bulwark amidships. The clearance below the lower chain or wire may not exceed 230 mm, and the distance between the other chains or wire may not exceed 380 mm.

An approved working jacket or a working suit with an approved means of buoyancy shall be used when work is being carried out in the area.

Visibility of working areas

From the wheelhouse it shall be possible to view all workplaces on the weather deck. Where it is necessary to ensure such visibility, the wheelhouse shall be provided with windows to the floor. The wheelhouse shall be positioned at a height such that visibility is not prevented or restricted by equipment, etc. installed on deck. On existing vessels, visibility shall be provided from the vessel's manoeuvring platform of the places on the vessel where the crew is engaged in launching and hauling in fishing gear and bringing the catch on board.

Where it is not possible for technical reasons to ensure full visibility from the vessel's manoeuvring platform, a video surveillance system shall be installed suitable for maritime use.

Where it is not possible to establish proper visual and audible communication between the workplace and the bridge, a suitable and reliable communication system shall be established.

Lighting

All passageways, all working spaces and all working areas on board the vessel shall be well lit. The lighting shall be sufficient to ensure that the work may be carried out with full regard to health and safety.

The amount of light shall be sufficient for distinguishing details. The light shall create suitable contrast conditions and may not blind.

The lighting on the deck may not obstruct the visibility from the wheelhouse.

Winches

Winches shall, as far as practicable, be designed, guarded and fenced so that moving parts may not lead to man overboard risks. All protective devices shall have the required strength.

Fairleads shall be provided with protection devices or other equally effective approved safety arrangements capable of offering protection.

If technically possible, wires along the deck shall be carried in pipes or be covered in an equally safe way. They shall be placed so that passage on deck may take place with full regard to safety.

It shall be possible to reverse winches. Operating handles shall automatically return to the neutral position when released and be provided with a locking device or shielding preventing unintentional activation.

Net hauling equipment

The passageway between bulkheads, deckhouses or the like and fully rolled up hauling equipment with nets shall as a minimum be 600 mm.

Precautions shall be taken to prevent trawl boards and trawl separation devices from accidentally swinging inboard, e.g. by erecting one or more movable protective bars, pipe clamps or the like at the gallows.

When working in way of moving equipment crew must be aware of the risks of loose items on clothing.

ANNEX C

Dinghies and Rafts. If a vessel either carries or tows an inflatable or dinghy, person in water (PIW) recovery is often made easier. The lift into a dinghy or raft is shorter, usually safer, and less damaging to all concerned. The subsequent transfer to the rescue vessel is made easier because crews can assist the transfer from outside the vessel. Crews in a small inflatable or dinghy should wear proper exposure and floatation gear. For PIW recovery, it is preferable to tether these little craft and stop main engine to avoid the danger of turning propellers.

Stirrups and ladders. Stirrups are formed by making loops in lengths of line and can be secured over the side to provide hand and foot holds to a PIW. Ladders may be either solid or the rope type. Ladders usually need to be adjusted so they do not tilt inward from gunwale to waterline making them almost impossible to climb. Even if a good ladder is available, crews should practice for situations where the PIW does not have the strength to climb aboard on their own

CQC Fibrelight Recovery Cradle

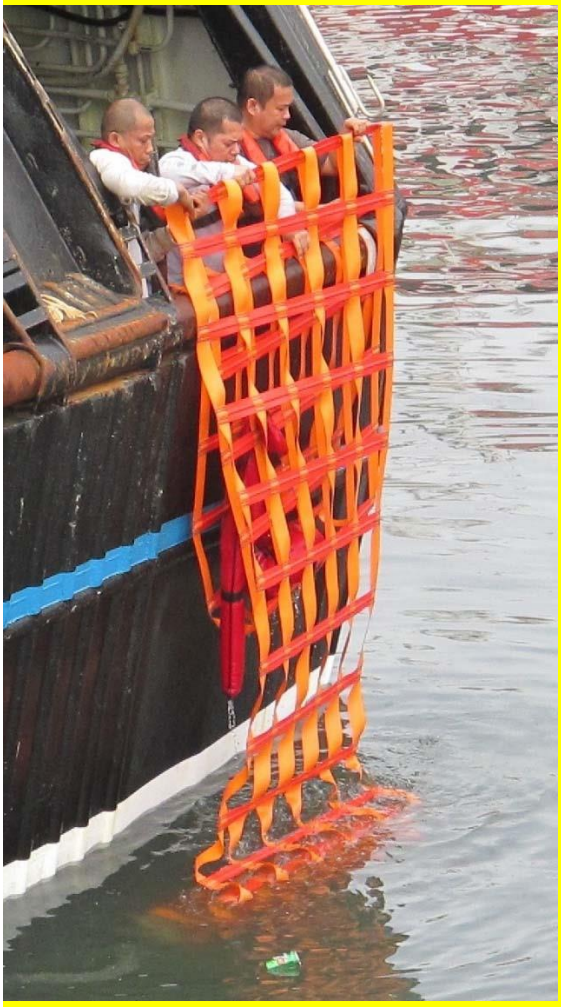
Fibrelight Recovery Cradle:

The SOLAS approved Fibrelight Cradle is a maritime recovery system that can be operated by a single crewmember. The Cradle can also serve as a boarding ladder, scramble net and stretcher.

The Fibrelight Cradle is lighter, more compact, and more versatile than any comparable devices. The cradle requires only regular inspections and minimal maintenance every three years. The cradle can be easily rolled and stowed.

The Fibrelight Recovery Cradle is primarily designed for use by rescue craft, rigid inflatables and ship lifeboats and marinas, however it can have multiple other uses.

It forms both a robust scramble net as well as a temporary stretcher for immediate casualty evacuation. Fibrelight Cradles are available in lengths of 2, 3, 4 and 5 metres and are 1.3 metres wide. The Cradles are amazingly lightweight, a 3 metre cradle weights as little as 5 kilograms.



SB Rescue Sling

For recovering a casualty without the rescuer having to enter the water, from a boat or a steep-sided canal/lake or where there is a large vertical-distance recovery. It can be operated by one person, has an effective reach of up to 4.5 metres, and yet weighs only 3 Kg.

Without this equipment, a casualty could be lost due to the freeboard, crew fatigue or the lack of crew numbers. The SB Rescue Sling is approved for military use (NATO stock-listed) and is widely-used on pilot boats, workboats, small passenger craft and rescue vessels. http://www.icbrindle.com/SB-Rescue-Sling

Man Overboard Recovery – Sea Scoopa

Once Sea Scoopa is underneath MOB, parbuckle lift in and up. Sea Scoopa manufactured by FERNO Australia for man overboard recovery. This device helps get your MOB safely and easily back onboard. Its design delivers 2:1 mechanical advantage to help you recover a potentially unconscious person, in water–logged clothing, from the sea.	

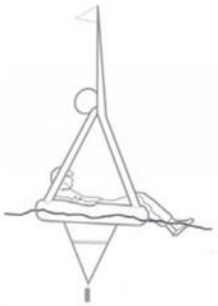
MobMat brings a simple and effective solution to man overboard recovery for small craft, especially for short handed crew, No complicated set up, just connect to a halyard and put over the side for fast and simple deployment

The MobMat system is a semi rigid lifting cradle. The casualty is not rolled up the side of the vessel but remains horizontal. This reduces the chances of heart failure due to hydrostatic squeeze. MobMat is now supplied complete with a rugged rail bag for safe and accessible storage on the guard rails of your boat. This means that should there be a need to use the Mobmat it is immediately available without having to delve into a locker. This design was tested during two Atlantic crossings and has proven to be ideal for the task.	**MobMat** This is the original design, and is primarily for yachts. It works well for short handed crew.  The base battens give the sling some rigidity and maintain the shape, they also provide weight to keep the sling underwater.

JONBUOY RECOVERY MODULE JON1015

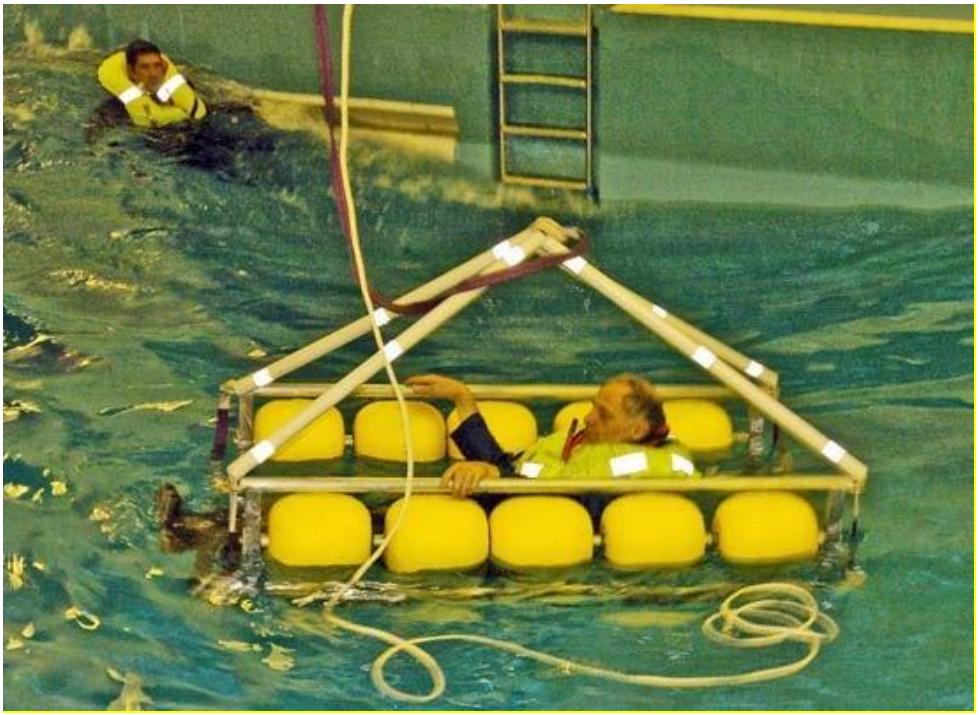
MARK 5 VERSION - INCLUDES AIS READY PATCH!

Recovering a man overboard can be an extremely hazardous operation for both the crew and the casualty, regardless of vessel size. The Jonbuoy Recovery Module is designed to make this a simple operation, whilst increasing vital visibility and buoyancy for the casualty. Accepted as a direct replacement for a traditional danbuoy, horseshoe, drogue, light and whistle, specified within the ISAF offshore special regulations.

	Once inflated the Jon Buoy Module can be boarded.  To recover the Jon Buoy Module, attach a halyard or line to the webbing strop, and winch the Occupant and the Module back on board.

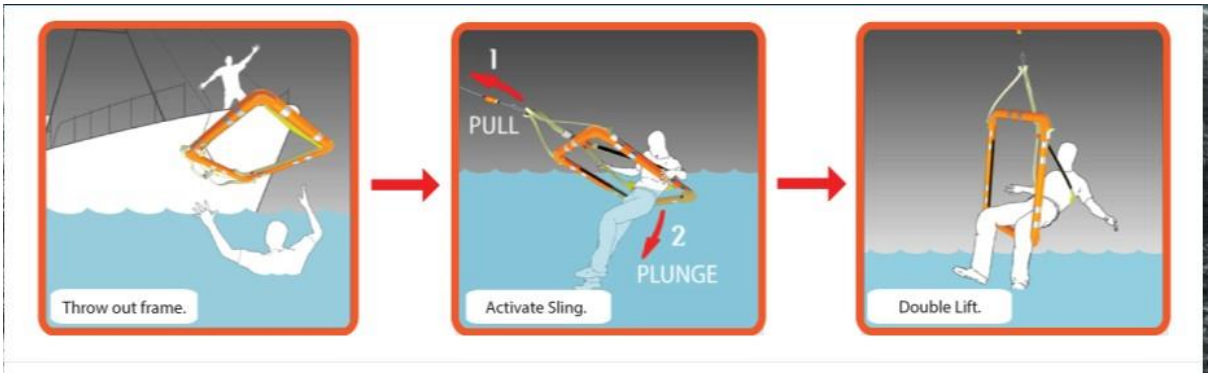
Rob Reid Rescue

North East Fabricators Ltd (Scotland) in association with C Rescue

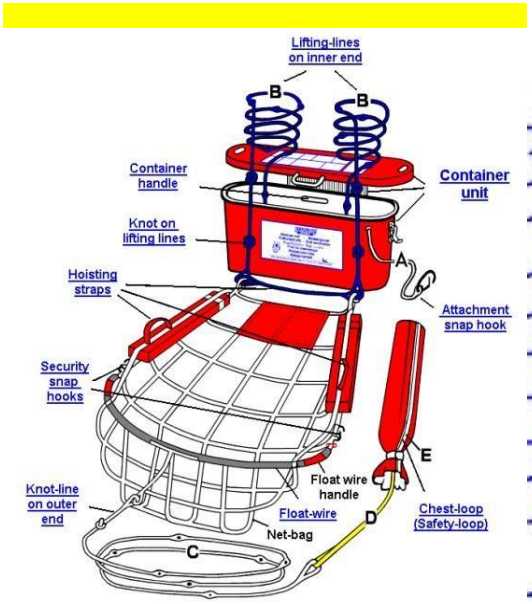


The Rob Reid Rescue Device can cut vital minutes off a rescue operation and is simple to deploy. Weighing just 71lbs (32kg) for the one/two man cage and 89lbs (39.5kg) for the two/three man version, the rescue device can be deployed in just 20 seconds. Once in the water, it floats with the aluminium diamond grill base 300mm below the surface, providing a safe haven with easy entry. The horizontal recovery position then reduces the risk of the casualty going into shock while being lifted back on board. The speed of deployment and recovery may eliminate the need to launch a rescue craft. The C Rescue MOB recovery cage is especially well-suited for use aboard high-sided vessels equipped with some sort of powered hoist or crane.

QUIKSLING enables fast recovery from rough seas, in a medically advised (deck chair) posture, where circumstances favour a fast throw-out product.



The Markusnet is a unique means to retrieve a man overboard manually, as well as, by crane, when every second counts, using the vessel deck as the rescue base.



The Markusnet is a revolutionary rescue device that enables one person to react immediately and effectively to a man overboard situation anywhere along a ship's side or quay and two rescuers to lift the victim in seconds, despite the freeboard height of vessel, thereby greatly increasing the casualty's chances of rescue. It is also an ideal teaching tool to prevent man overboard hazards and tragedy, as well as, to train your crew to becoming professional inwater MOB rescue team.

The Markusnet can also be used with a crane. It provides the potential to lift/hoist the casualty standing in the net, sitting in with legs facing ship or sitting out with bottom in the net. It can also be used to lift/hoist an unconscious man overboard in a horizontal position.

The Markusnet was originally developed and tested in co-operation with the Icelandic Lifesaving Association, the Danish Coastguard and the Robert Gordon Institute of Technology in Aberdeen and is recommended by them for use onboard vessels and harbours. The third generation of this unique rescue device was developed as a Eureka/Halios Development Project and tested by the Icelandic Directorate of Shipping, Maritime Safety Centre in Iceland and the Royal Navy of the Netherlands.

The Markusnet is mandatory equipment on decked vessels in several countries. It is also standard equipment in all harbours in Iceland and is now the model for international standards. It is manufactured in six standard versions, depending on type and size of vessel and height from water to rescue deck. (Lloyd's Register / SOLAS approved?)

Rescue System Life-Link

The Lalizas Life Link Man-Overboard Rescue system is designed to be permanently mounted in its own soft, easy clean PVC bag.

The kit contains 50m of floating line attached to a sturdy buoyant PVC life-sling and a personal retaining clip for added safety. Deployment is achieved by removing the Life Link, attaching the floating line to a secure point and throwing astern. Once in the water the boat should circle the casualty allowing the Life Link to be towed to their aid. Rescue is completed when the casualty is safely clipped into the Life Link winched to the boat and hauled on board.	

The Jason's Cradle® MOB system

Bespoke Standard Cradle's range from 530mm to 1050mm Wide and 2290mm to 6290mm Long •The Standard Rescue Cradle is simply fixed to the deck or rail to enable deployment within seconds. •Deployment of the rescue Cradle forms a non-collapsible scoop. •The casualty is guided into the cradle head first. •A Strop and /or Hauling lies are pulled to close the loop. •A co-ordinated and methodical lift takes place and the casualty is retrieved by rolling onto the deck in the medically preferred position. Operating the Jason's Cradle® with high freeboard vessels is no problem using a block and tackle or davit crane system.	

"RescueCASE". Initially use for this product was to enhance survivability in a man-overboard or abandon ship scenario. The product is configured as inflatable and is designed to allow survivors to recover themselves directly into the structure from the water with the intent being that a person is out of the water. The RescueCASE is manufactured from lightweight PU coated fabric; the same fabric used for EASA compliant Aerospace and defence inflatable liferafts	

ANNEX D: SAMPLE MUSTER LISTS

Muster List; Name of Fishing Vessel (Crew 6 +)

Crew Member	**Stage 1; Muster Point** Muster at Muster station with warm clothing, lifejacket securely fastened	**Stage 2; Emergency Parties** Form work parties to save the ship and attend to casualties	**Stage 3; Abandon Ship** Abandon ship on verbal order of the skipper
SKIPPER	**Muster point 1. Wheel House** Don Life Jacket Inform Coastguard by radio	**Maintain Communications with Coastguards**	Issue Verbal command Broadcast Mayday **Deploy EPIRB and Portable VHF** Ensure all crew has embarked to life rafts **Take charge of life raft No 1**
MATE	**Muster point 1. Wheel House** Don Life Jacket Account for all crew	**Take charge of Emergency parties**	Broadcast to Crew, **Abandon Ship to life rafts. Deploy First Aid Kit and take charge of life raft No 2**
BUNK 3	**Muster point 2. Boat Deck** Don Life Jacket Ready life rafts for deployment	**Under mates direction** **Undertake first aid duties**	Deploy life raft to lee side of vessel, secure painter. **Abandon ship to life raft 1**
BUNK 4	**Muster point 2. Boat Deck** Don Life Jacket Ready life rafts for deployment	**Under mates direction**	Deploy life raft to lee side of vessel, secure painter. **Abandon ship to life raft 2**
BUNK 5	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 1**
BUNK 6	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 2**
Additional Crew	**Muster point 2. Fish Room hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon ship to life rafts** as directed by the mate

Muster List; Name of Fishing Vessel (Crew 12+)

Crew Member	**Stage 1; Muster Point** Muster at Muster station with warm clothing and lifejacket securely fastened	**Stage 2; Emergency Parties** Form work parties to save the ship and attend to casualties	**Stage 3; Abandon Ship** Abandon ship on verbal order of the skipper
SKIPPER	**Muster point 1. Wheel House** Don Life Jacket Inform Coastguard by radio	**Maintain Communications with Coastguards**	Issue Verbal command Broadcast Mayday **Deploy EPIRB, Ships Distress Flares and Portable VHF** Ensure all crew has embarked to life rafts **Take charge of life raft No 1**
MATE	**Muster point 1. Wheel House** Don Life Jacket Account for all crew	**Take charge of Emergency parties**	Broadcast to Crew, **Abandon Ship to life rafts. Deploy First Aid Kit and take charge of life raft No 2**
BUNK 3	**Muster point 2. Boat Deck** Don Life Jacket Ready life rafts for deployment	**Under mates direction Undertake first aid duties**	Deploy life raft to lee side of vessel, secure painter. **Abandon ship to life raft 1**
BUNK 4	**Muster point 2. Boat Deck** Don Life Jacket Ready life rafts for deployment	**Under mates direction**	Deploy life raft to lee side of vessel, secure painter. **Abandon ship to life raft 2**
BUNK 5	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 1**
BUNK 6	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 2**
BUNK 7	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 1**
BUNK 8	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 2**
BUNK 9	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 1**

BUNK 10	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 2**
BUNK 11	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 1**
BUNK 12	**Muster point 3. Fish Room Hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon Ship to life raft 2**
Additional Crew	**Muster point 3. Fish Room hatch** Don Life Jacket Await further orders	**Under mates direction**	**Abandon ship to life rafts as directed by the mate**

DOCUMENT AMENDMENT HISTORY

Version Number	Status / Change	Date	Author Reviewer	Content Approver	Next Review Date/Expiry Date
03.21	• Revision to section on personal floatation devices.	05/03/21	I Platts	G Stone	05/03/23
09.21	• Revision of references to MSN1871 Amendment No.2 • Update to plans and procedures an owner/skipper should have in place to deal with Man overboard • Update to PFD performance requirements to prohibit devices with secondary donning action and guidance on crotch strap checks	30/06/21	D Fenner/I Platts	G Stone	06/09/23