GD02-2014

Guidelines for Preparation of Plans and Procedures for Recovery of Persons from the Water

Contents

Introduction

The Maritime Safety Committee (MSC) of International Maritime Organization considered and adopted, at its ninety-first session, resolution MSC.338(91) relating to the amendments to SOLAS 1974 on 30 November 2012. The amendments are to be deemed to have been accepted on 1 January 2014 and are to enter into force on 1 July 2014 in accordance with the tacit procedure.
According to the amendments, a new regulation 17-1 is added in SOLAS Chapter III, requiring all ships to have ship-specific plans and procedures for recovery of persons from the water.

Chapter 1 General

1.1 General provisions

1.1.1 Specific plans and procedures for recovery of persons from the water are to be prepared according to the actual provision and arrangement of the ship's relevant equipment, taking into account the Guidelines for the Development of Plans and Procedures for Recovery of Persons from the Water (MSC.1/Circ.1447) developed by International Maritime Organization. The plans and procedures are to identify the equipment intended to be used for recovery purposes and measures to be taken to minimize the risk to shipboard personnel involved in recovery operations.

1.1.2 Life-saving and other equipment carried on board may be used to recover persons from the water, even though this may require using such equipment in unconventional ways.

1.1.3 The Guidelines for Preparation of Plans and Procedures for Recovery of Persons from the Water is to be read in conjunction with the Guide to recovery techniques (MSC.1/Circ.1182) and the Guide for cold water survival (MSC.1/Circ.1185/Rev.1).

1.1.4 In particular, the Guide to recovery techniques (MSC.1/Circ.1182) provides a number of examples of how certain types of equipment can be used to recover persons from the water; and can also be used for preparation of plans and procedures for recovery of persons from the water.

1.1.5 The initiation or continuation of recovery operations is to be at the discretion of the master of the recovering ship, in accordance with the provisions of SOLAS regulation III/17-1.

1.1.6 The plans and procedures are to be considered as a part of the emergency preparedness plan required by paragraph 8 of part A of the International Safety Management (ISM) Code.

1.1.7 The plans and procedures are to be prepared by the ship owner or ship management company and to be kept onboard ship for the use of study and training and to be readily available for examination at all times.

1.1.8 The Guidelines aims at providing the industry with the references for complying with the requirements of the conventions, and the contents of the format set out in the Appendix may be added or reduced as appropriate in preparation of the plans and procedures, taking into account the actual condition of the ship.

1.2 Definitions and abbreviations

1.2.1 Definitions and abbreviations in the Guidelines are consistent with those in SOLAS Chapter III and LSA Code, for the purpose of the Guidelines:

.1 Person overboard: A person falls overboard from the ship by accident or those who fall overboard from other ships or marine structures or other means of transportations.

.2 Recovery: A recovery includes the active recovery operations taken according to the distress information or once the recovery target is found, assisting other ships providing recovery aids or reasonable standing by of people to be recovered when it is assessed that the recovery cannot be attempted by the ship.

Chapter 2 Application

2.1 The Guidelines applies to independent or co-ordination recovery conducted by ships engaged on international voyages at sea, co-ordination recovery conducted by ships and helicopters and reasonable standing by conducted by ships to persons recovered from the water.

2.2 Reference may be made to the Guidelines for recovery operations conducted by ships engaged on non-international voyages.

2.3 Ships engaged on international voyages are to be provided with the Plans and Procedures for Recovery of Persons from the Water according to the following requirements:

2.3.1 Ships constructed (the keels of which are laid or which are at a similar stage of construction) before 1 July 2014 are to comply with this requirement by the first periodical or renewal safety equipment survey of the ship to be carried out after 1 July 2014, whichever comes first.

2.3.2 Ships constructed (the keels of which are laid or which are at a similar stage of construction) on or after 1 July 2014 are to comply with this requirement by the time close to the completion of survey of construction and not later than the date of issuance of Safety Equipment Certificate.

2.4 Ro-ro passenger ships complying with SOLAS regulation III/ 26.4 are to be deemed to comply with the provision requirements of the plans and procedures.

Chapter 3 Contents and Requirements of Plans and Procedures for Recovery of Persons from the Water

3.1 General requirements

3.1.1 The plan is to be written in one or more working languages of the ship. Where the ship's working language changes, a new working language is to be used for preparation of the plan.

3.1.2 The plans and procedures aim at providing guidance for the master and other crew members during the recovery of persons from the water and to minimize the risk of harm to shipboard personnel involved in recovery operations and persons in the water. Therefore, the plan is to be able to remind the master and crew to take rapid and effective measures structurally, logically and timely as far as possible.

3.1.3 Relevant drawings and information onboard, such as General Arrangement, drawings or information relating to the arrangement of life-saving appliances, Ship Manoeuvring Manual, etc., as well as operation instructions for recovery equipment are to be kept together with the Plan, to enhance the reaction ability and to reduce mistakes and errors.

3.1.4 Periodical check of the Plan is to be carried out by the ship owner, operator or master where necessary, to ensure that the plan prepared is of the latest version. Change of the information and equipment is to be incorporated into and back fed to the Plan as soon as possible. The Plan is to be verified by the ship owner, operator or master after used for the recovery operations and is to be amended or updated where necessary.

3.1.5 In order to implement the Plan effectively, procedures for training and drills are to be established in conjunction with routine man-overboard drills to ensure that crew are familiar with the plans, procedures and equipment for recovery of persons from the water, and records are to be made accordingly.

3.1.6 The plans and procedures are to be included in the shipboard safety management system, to be considered as a part of the emergency preparedness plan required by paragraph 8 of part A of the International Safety Management (ISM) Code.

3.1.7 Life-saving and other equipment carried on board may be used to recover persons from the water, even though this may require using such equipment in unconventional ways.

3.1.8 The initiation or continuation or termination of recovery operations is to be at the discretion of the master of the recovering ship in his professional judgment, in accordance with the provisions of SOLAS regulation III/17-1.

3.2 Requirements for the contents of the Plans and Procedures for Recovery of Persons from the Water

3.2.1 Plans and Procedures for Recovery of Persons from the Water is to be prepared in compliance with the requirements of the Guidelines for the Development of Plans and Procedures for Recovery of Persons from the Water (MSC.1/Circ.1447), taking into account the guidance provided by Guide to Recovery Techniques (MSC.1/Circ.1182), Guide for Cold Water Survival (MSC.1/Circ.1185/Rev.1) and Volume III of International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual. The following contents are at least to be included in the preparation of plans and procedures by the company:

.1 Duties of master and crew

The plans and procedures are to define the duties and divisions of the master and crew related

during the recovery of persons from the water, e.g. who will be required for the recovery process, who will manage the ship in the meantime, so that the plans and procedures may be implemented rapidly and effectively by shipboard personnel. The plans and procedures are also to specify that the initiation or continuation or termination of recovery operations is to be at the discretion of the master of the recovering ship in his professional judgment.

.2 Trainings, drills and records for the recovery of persons from the water

The plans and procedures are to specify the frequency of the trainings and drills for the crew. Such drills may be conducted in conjunction with other onboard routine drills, and records are to be made accordingly.

.3 Recovery equipment

Life-saving and other equipment carried on board may be used to recover persons from the water, even though this may require using such equipment in unconventional ways. The plans and procedures are to list the number and details of recovery equipment. If carried, dedicated recovery equipment such as rescue net, rescue basket and throwing apparatus of inflatable lifebuoy is to be clearly marked with the maximum number of persons it can accommodate, based on a weight of 82.5 kg per person. Dedicated personnel are to be appointed for the maintenance of the recovery equipment as required.

.4 Measures taken to minimize the risk to shipboard personnel involved in recovery operations and persons fall overboard.

3.2.2 Risk assessment

A risk assessment is to be conducted and documented when preparing plans and procedures for recovery of persons from the water, including hazard identification and establishment of risk control measures. The hazard factors influencing the recovery personnel and the consequences are to be identified and risk control measures are to be established accordingly. The analysis subject of hazard identification is to include equipment intended to be used, taking into account the anticipated conditions and ship-specific characteristics. Ship-specific procedures for the recovery of persons from the water are to specify the anticipated conditions under which a recovery operation may be conducted without causing undue hazard to the ship and the ship's crew, taking into account, but not limited to:

.1 manoeuvrability of the ship;

.2 freeboard of the ship;

.3 points on the ship to which casualties may be recovered;

.4 characteristics and limitations of equipment intended to be used for recovery operations;

.5 available crew and personal protective equipment (PPE);

.6 wind force, direction and spray;

.7 significant wave height (Hs);

.8 period of waves;

.9 swell; and

.10 safety of navigation.

3.2.3 The recovery plans and procedures are to facilitate the transfer of persons from the water to the ship while minimizing the risk of injury from impact with the ship's side or other structures, including the recovery appliance itself.

3.2.4 Recovery operations are to be conducted at a position clear of the ship's propellers and, as far as practicable, within the ship's parallel mid-body section.

3.2.5 A source of illumination and, where required, a source of power is to be available for the area where the recovery operation is conducted.

3.2.6 To the extent practicable, recovery procedures are to provide for recovery of persons in a horizontal or near-horizontal ("deck-chair") position. Recovery in a vertical position is to be avoided whenever possible as it risks cardiac arrest in hypothermic casualties (refer to the Guide for cold water survival (MSC.1/Circ.1185/Rev.1)).

3.3 Implementation of recovery of persons from the water

3.3.1 The plans and procedures are to specify details of the specific recovery operation, factors to be considered in implementation, risk assessment and measures to be taken. Specific operations include planning for recovery, preparation prior to recovery, bring people to the side of the ship, getting people aboard the ship, shelter and care of people recovered and standing by when people cannot be recovered. Detailed guidance for recovery personnel are provided in the Guide to Recovery Techniques (MSC.1/Circ.1182), the Guide for Cold Water Survival (MSC.1/Circ.1185/Rev.1) and Volume III of International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, due consideration is to be given to such guidance and recommendations in the preparation of plans and procedures.

Chapter 4 Check and Survey of the Plans and Procedures

4.1 Initial checks and surveys

4.1.1 Ships are to be provided with ship-specific plans and procedures for recovery of persons from the water, which is prepared based on the existing arrangement and equipment of the ship. The plans and procedures are to be kept on board for use when necessary.

4.1.2 The plans and procedures are to comply with the requirements of the Guidelines for the Development of Plans and Procedures for Recovery of Persons from the Water (MSC.1/Circ.1447), taking into account:

.1 MSC.1/Circ.1182: Guide to Recovery Techniques; and

.2 MSC.1/Circ.1185/Rev.1: Guide for Cold Water Survival.

4.1.3 It is to confirm in the initial check and survey that the contents of the plans and procedures for recovery of persons from the water are in compliance with the above mentioned requirements. It is also to confirm that the arrangement and equipment included in the plans and procedures, such as rescue equipment/life-saving appliances, dedicated recovery equipment, arrangement of the source of illumination are available. If carried, dedicated recovery equipment is to be clearly marked with the maximum number of persons it can accommodate, based on a weight of 82.5 kg per person.

4.1.4 It is to check that documents, such as plans and procedures for recovery of persons from the water, relevant operating manual, maintenance plan are kept on board the ship.

4.1.5 Effectiveness tests may be carried out for the arrangement and equipment included in the Plans and Procedures for Recovery of Persons from the Water where necessary.

4.1.6 After a satisfactory verification of the above-mentioned requirements, the surveyor is to mark “Confirm” on the cover of the Plans and Procedures for Recovery of Persons from the Water and endorse with the business seal.

4.2 Subsequent checks and surveys

4.2.1 It is to confirm that the ship is provided with the Plans and Procedures for Recovery of Persons from the Water in conjunction with the annual survey and safety survey of the above-mentioned equipment. The records for emergency preparedness are to be checked.

4.2.2 It is to confirm that the plans and procedures are maintained to be the latest valid version. In cases that the change of the general arrangement of the ship has an influence on the implementation of the plans and procedures or the crew with appointed duties change or the relevant equipment is replaced, the plans and procedures are to be updated. The plans and procedures are to be re-prepared in cases that the flag of ship, ship owner or management company is replaced and in other necessary situations.

4.2.3 It is to confirm that relevant equipment included in the plans and procedures are available and in good condition. The effectiveness tests may be carried out where necessary.

Plans and Procedures for Recovery of Persons from the Water

(sample)

Name of ship: XXXXXXXX

Ship's call sign: XXXXX

IMO Number: XXXXXXXXX

Revision Records

Revision No.	Date of revision	Revision items	Signature

Particulars of Ship

Name of ship:

Port of registry:

Distinctive number or letters:

IMO Number:

Registration number:

Type of ship:

Date of delivery:

Length overall:

Moulded breadth:

Moulded depth:

Summer draught:

Gross tonnage:

Deadweight:

Manufacturer:

Ship owner/operator and address:

Contents

Chapter 1 General

1.1 Brief introduction

1.1.1 Under long-standing traditions of the sea and various provisions of international law, ship masters are obliged to assist others in distress at sea whenever they can safely do so.

1.1.2 Plans and Procedures for Recovery of Persons from the Water of the ship is to be prepared in accordance with SOLAS regulation III/17-1 and on the basis of the Guidelines for the Development of Plans and Procedures for Recovery of Persons from the Water (MSC.1/Circ.1447), Guide to Recovery Techniques (MSC.1/Circ.1182) and Guide for Cold Water Survival (MSC.1/Circ.1185/Rev.1) with reference to the guidance and recommendations provided in volume III of IAMSAR Manual.

1.2 Purpose

The plans and procedures aim at providing guidance for the master and other crew members during the recovery of persons from the water and to minimize the risk of harm to shipboard personnel involved in recovery operations and persons in the water.

1.3 General requirements

1.3.1 The plan is to be written in one or more working languages of the ship. Where the ship's working language changes, a new working language is to be used for preparation of the plan.

1.3.2 Relevant drawings and information onboard, such as General Arrangement, arrangement plan of life-saving appliances, Ship Manoeuvring Manual, etc., as well as operation instructions for recovery equipment are to be kept together with the Plan.

1.3.3 Periodical check of the Plan is to be carried out by the ship owner, operator or master, to ensure that the plan prepared is of the latest version. Change of the information and equipment is to be incorporated into and back fed to the Plan as soon as possible. The Plan is to be verified by the ship owner, operator or master after used for the recovery operations and is to be amended or updated where necessary.

1.3.4 In order to implement the Plan effectively, procedures for training and drills are to be established in conjunction with routine man-overboard drills to ensure that crew are familiar with the plans, procedures and equipment for recovery of persons from the water and records are to be made accordingly.

1.3.5 The plans and procedures are to be included in shipboard safety management system, to be considered as a part of the emergency preparedness plan required by paragraph 8 of part A of the International Safety Management (ISM) Code.

Chapter 2 Duties of Master and Crew

2.1 Duties of the master

2.1.1 The master is responsible for the commanding, manoeuvring of the ship, external contact, preparation of plan and organizing the crew to conduct the recovery operation as planned.

2.1.2 Identification and assessment are to be conducted by the master for various potential risks which may occur during the recovery operations and measures are to be taken to minimize the risk of harm to the recovery ship, personnel involved in recovery operations and persons in the water.

2.1.3 The use of ship's recovery equipment must be for the master to decide, depending on the particular circumstances of the recovery scene.
2.1.4 The initiation or continuation or termination of recovery operations is to be at the discretion of the master of the recovering ship in his professional judgment.
2.1.5 Procedures are to be established by the master to ensure man-overboard drills are considered as a part of the emergency preparedness.

2.2 Duties of the crew

The crew members are to be familiar with the plans and procedures and the operation of the relevant recovery equipment and to be clear about their divisions and duties during the recovery operations. They are also to carry out the maintenance of the recovery equipment as required, to ensure that the equipment are readily available.

2.3 Duties and divisions of master and crew

Duties and divisions of the crew during the recovery operations are to be listed by the company or ship master according to the actual situation and manning of the crew. The following table is taken as an example:

Title	Location	Duties
Master	Navigation bridge/scene	Commander in chief, manoeuvring of the ship, external contact
Chief officer	Recovery scene	On-scene commanding, organizing on-scene recovery
Second officer	Navigation bridge	Assisting the master in manoeuvring the ship, responsible for communications according to the master's directions
Third officer	Recovery scene	Assisting the chief officer in the commanding at scene, responsible for releasing the lifeboat
Boatswain	Recovery scene	Assisting the release of the lifeboat, going with the boat, recovering person(s) from the water
Seaman 1	Recovery scene	Boat crew, going with the boat, recovering person(s) from the water
Seaman 2	Recovery scene	Look-out, keeping in touch with the navigation bridge and on-scene recovery personnel
Seaman 3	Recovery scene	On-scene recovery, providing shelter and care for the persons recovered
Chief engineer	Engine room	Management of the equipment in the engine room, ensuring the satisfactory operation of the equipment
First engineer	Recovery scene	Assisting the chief officer in on-scene recovery operations
Second engineer	Engine room	Assisting the chief engineer in the management of equipment in the engine room
Third engineer	Recovery scene	Assisting the releasing of boat, on-scene recovery
Chief motorman	Recovery scene	Assisting the releasing of boat, on-scene recovery
Motorman 1	Recovery scene	Boat crew, going with the boat, recovering person(s) from the water
Motorman 2	Recovery scene	On-scene recovery, providing shelter and care for the person(s) recovered
Cook, steward	Recovery scene	On-scene recovery, providing shelter and care for the person(s) recovered

Chapter 3 Trainings and Drills

3.1 Trainings

3.1.1 On-board training in the use of the recovery equipment is to be given as soon as possible but not later than two weeks after a crew member joins the ship so that the crew members may be familiar with the duties and tasks assigned in the plans and procedures.

3.1.2 The training includes but not limited to:

.1 operation and use of liferafts and lifeboats onboard the ship (including other equipment which may be used for recovering persons from the water);

.2 problems of hypothermia, first-aid treatment for hypothermia and other appropriate first-aid procedures;

.3 special instructions necessary for use of recovery equipment and manoeuvring of the ship in severe weather and severe sea conditions; and

.4 relevant information in the Guide to Recovery Techniques (MSC.1/Circ.1182), Guide for Cold Water Survival (MSC.1/Circ.1185/Rev.1) and volume III of IAMSAR Manual.

3.2 Drills

3.2.1 A man-overboard drill is to be conducted at least once every three months (it may be conducted in conjunction with routine man-overboard drills) so that the crew may be familiar with the plans and procedures, their duties and the use of relevant equipment.

3.2.2 Each drill is to include (to be prepared on the basis of the ship's actual provision):

.1 the check of recovery equipment and personal protective equipment;

.2 the check of relevant communications equipment;

.3 operation of davits used for launching liferafts;

.4 operation and launching of lifeboats;

.5 starting and operating the lifeboat engine; and

.6 a mock recovery of persons from the water.

3.3 Records

Relevant records are to be made for each drill.

Records of drills for recovery of persons from the water

Date	Name/title	Duties	Records of the progress	Signature	Check	Remarks

Chapter 4 Recovery Equipment

4.1 Life-saving and other equipment carried on board may be used to recover persons from the water, even though this may require using such equipment in unconventional ways.

4.2 Dedicated recovery equipment (rescue net, rescue basket) is to be clearly marked with the

maximum number of persons it can accommodate, based on a weight of 82.5 kg per person.

4.3 The ship's recovery equipment is to be maintained by dedicated personnel according to SOLAS regulation III/20.

4.4 Details of the ship's equipment which may be used for the recovery of persons from the water (to be prepared on the basis of the ship's actual provision):

4.4.1 Rescue boats

(To list detailed parameters)

4.4.2 Liferafts

(To list detailed parameters)

4.4.3 Marine evacuation systems

(To list detailed parameters)

4.4.4 Lifebuoys

Number:

Stowage position:

4.4.5 Line-throwing apparatus

Number:

Stowage position:

4.4.6 Embarkation ladder

Number:

Stowage position:

(To list detailed parameters)

4.4.7 Pilot ladder

Number:

Stowage position:

(To list detailed parameters)

4.4.8 Accommodation ladder

(To list detailed parameters)

4.4.9 Dedicated recovery equipment (such as rescue net, recue basket etc.)

(To list detailed parameters of each equipment)

4.4.10 Personal protective equipment of the crew

Number and stowage position of lifejackets:

Number and stowage position of immersion suits:

4.4.11 Medicine chest

Stowage position:

4.4.12 Detection aids

Name of equipment	Stowage position
Radar transponders	
EPIRB	

4.4.13 Communications equipment

Name of equipment	Performance/purpose	Stowage position
Hand-held radiotelephone		

4.4.14 Equipment which may be used for recovery of persons from the water (such as cranes,

winches, davits, etc.)
(To list detailed parameters of each equipment)

Chapter 5 Risk Assessment and Measures Taken to Reduce Risks

5.1 Risk assessment

Identification and assessment are to be conducted by the master for various potential risks which may occur during the recovery operations and measures are to be taken to minimize the risk of harm to the recovery ship, personnel involved in recovery operations and persons in the water. The risk assessment is to include the characteristics and limitations of equipment intended to be used, taking into account the anticipated conditions and ship-specific characteristics. Ship-specific procedures for the recovery of persons from the water are to specify the anticipated conditions under which a recovery operation may be conducted without causing undue hazard to the ship and the ship's crew, taking into account, but not limited to:

.1 manoeuvrability of the ship;
.2 freeboard of the ship;
.3 points on the ship to which casualties may be recovered;
.4 characteristics and limitations of equipment intended to be used for recovery operations;
.5 available crew and personal protective equipment (PPE);
.6 wind force, direction and spray;
.7 significant wave height (Hs);
.8 period of waves;
.9 swell; and
.10 safety of navigation.

5.2 Measures taken to reduce risks

5.2.1 The recovery plans and procedures are to facilitate the transfer of persons from the water to the ship while minimizing the risk of injury from impact with the ship's side or other structures, including the recovery appliance itself.

5.2.2 Recovery operations are to be conducted at a position clear of the ship's propellers and, as far as practicable, within the ship's parallel mid-body section.

5.2.3 A source of illumination and, where required, a source of power is to be available for the area where the recovery operation is conducted.

5.2.4 To the extent practicable, recovery procedures are to provide for recovery of persons in a horizontal or near-horizontal ("deck-chair") position. Recovery in a vertical position is to be avoided whenever possible as it risks cardiac arrest in hypothermic casualties (refer to the Guide for cold water survival (MSC.1/Circ.1185/Rev.1)).

5.3 Hazard identification and risk control measures

(Potential risks and corresponding measures are to be listed in the following table)

Recovery steps	Hazard identification				Risk control measures
	Ship-specific characteristics	Characteristics of recovery equipment	Anticipated conditions	Consequence	

Chapter 6 Implementation of Recovery

6.1 Planning for recovery

Recovery of persons from the water is an emergency event. The circumstances you find when you arrive at the scene will differ from incident to incident; but general planning can, and is to, be done. Effective recovery will occur, making sure that everyone understands the plan and their own place in it and full preparation is made. Due regard is to be paid to:

.1 current sea conditions, number, condition, location and disposition of persons in the water;

.2 risk to persons involved in recovery operations, appropriate recovery equipment onboard;

.3 duties and divisions of onboard persons involved in recovery operations;

.4 how to proceed to recovery scene and to conduct sufficient risk identification;

.5 assistance provided for persons in the water and preparations prior to recovery;

.6 recovery operation region and the selection of embarkation point;

.7 ways to bring persons to the side of the ship and get aboard the ship;

.8 shelter and care of persons after they are aboard;

.9 standing by when persons cannot be recovered.

6.2 Preparation prior to recovery

6.2.1 Preparation for recovery takes time, depending on how long the recovery is likely to take. Therefore a full preparation needs to be made prior to recovery operation until being able to recover the target effectively and rapidly.

6.2.2 The following equipment and stuffs are to be prepared ready for use:

.1 life-saving appliances: line-throwing apparatus, lifebuoys, lifejackets, immersion suits, rescue boats and liferafts;

.2 detection aids such as high-visibility/retro-reflective material, lights, a SART and an EPIRB;

.3 communications equipment: VHF, MF/HF, handheld radiotelephone;

.4 signaling equipment: signaling lamps, searchlights, signaling flags, loud hailer;

.5 medical assistance: shelter, stretcher, blanket, drink, food, medicine chest.

6.3 Bringing people to the side of the ship

6.3.1 The master is to assess the navigational hazards on scene, having due regard to the manoeuvrability of the recovering ship, on scene weather conditions, location, number and condition of persons in the water. Appropriate angle is to be selected based on the directions of wind and current and the ship is to be manoeuvred carefully at low speed when approaching the recovery target. For manoeuvrability of the ship, see Appendix 6 “Ship Manoeuvring Manual” for details.

6.3.2 Manoeuvring of the ship when approaching people overboard

Immediate action: The person overboard is noticed from the bridge and action is taken immediately. Delayed action: The person is reported to the bridge by an eyewitness and action is initiated with some delay. Person-missing action: The person is reported to the bridge as missing. Different means of manoeuvring of the ship are to be taken when approaching people overboard

due to the change of manoeuvrability in ambient circumstances and different timing for taking actions.

6.3.2.1 Single turn

.1 stop, rudder hard over to the side of the casualty;

.2 accelerate after the person overboard passes the stern;

.3 when heading 20º from the target, rudder to midship position, slow down and stop as appropriate, turning towards the upwind side of the target through inertia, bear steady, approaching the target;

.4 if it is hard to locate the target, rudder to midship position after deviation from the original course by 250º; slow down and search for the target; once the target is found, stopping manoeuvre to be initiated immediately and approach to the upwind side of the target;

.5 applicable to "immediate action", fastest and most effective way of approaching the target, not applicable to "delayed action" or "person-missing action".

6.3.2.2 Double turn

.1 stop, rudder hard over to the side of the casualty;

.2 accelerate after the person overboard passes the stern;

.3 after deviation from the original course by 180º, bear steady, keep eyes on the target while proceeding;

.4 when heading to the position where the target is 30º abeam behind, rudder hard over to the side of the casualty by 180º, slow down as appropriate, stop, approaching to the upwind side of the target;

.5 easy to manoeuvre, applicable to "immediate action", more applicable to "delayed action", not applicable to "person-missing action".

6.3.2.3 Williamson turn

.1 stop, rudder hard over to the side of the casualty;

.2 accelerate after the person overboard passes the stern;

.3 after deviation from the original course by 60º, rudder hard over to the opposite side;

.4 when heading 20º short of opposite course, rudder to midship position and ship to be turned to opposite course; searching while proceeding, slow down as appropriate and stop when the target is found, approaching the target;

.5 makes good original track line, good in reduced visibility or at night, applicable to "delayed action".

6.3.2.4 Scharnov turn

.1 rudder hard over;

.2 after deviation from the original course by 240º, rudder hard over to the opposite side;

.3 when heading 20º short of opposite course, rudder to midship position so that ship will turn to opposite course, searching the target while proceeding;

.4 takes vessel back into her wake, saving time, applicable to "person-missing action", not applicable to "immediate action" or "delayed action".

6.3.3 Sufficient lookouts are to be arranged to ensure that the recovery team will be able to communicate readily with the Bridge team and the location and condition of people in distress are to be reported to the Bridge and recovery team to avoid the recovery target being run down or crushed.

6.3.4 Effective communications with those in distress are to be established as far as possible to

facilitate the recovery operation.

6.3.5 The ship is to be upwind to keep sufficiently off the wind to minimize swinging and to create a lee for those in distress so that it is easier for them to approach the recovery ship.

6.3.6 In heavy weather, the use of oil for reducing the effect of the sea may be considered. Experience has shown that vegetable oils and animal oils, including fish oils, are most suitable for quelling waves. Lubricating oils may be used. However, fuel oil is not to be used, except as a last resort, as it is harmful to persons in the water.

6.3.7 The following measures may be taken to bring people to the side of the ship:

.1 The simpler buoyant items, lifebuoys in particular, can be dropped or thrown to those in distress on an early pass by the ship. If possible, contact is to be established by messenger (e.g. rocket line, rescue throw-line or heaving line) and the items passed under control. Lifebuoys with self-igniting light are to be thrown at night and those with self-activated smoke signal are to be used at daytime so that the lifebuoys can be found by people in the water and their location can be indicated. Attention is to be paid that the lifebuoys are to be thrown to the front of people in the water or to the nearby area. Lifebuoys are not to be thrown directly towards people in the water, as to avoid being injured.

.2 Lifebuoys with buoyant lines may be thrown to those in distress while the ship stands upstream to people in the water, by drifting them down to those in distress, or by towing them into a position where those in distress can get hold of them, and then pulled back to the ship.

.3 If the recovery operation looks like it might be protracted, one or more of your own liferafts can be deployed. You will need to guide it to the people you are assisting, and this means making a line fast to the raft before deploying it: do not rely on the raft’s own painter, which may tear away.

.4 Streaming lines astern is another option, preferably with buoyancy and means of attracting attention to them attached, lifebuoys, for example, with lights at night. The ship then is to be manoeuvred around those in distress so that they may take hold of the streamed line. Once this is done the ship may stop and those in need of recovery pulled alongside.

.5 For most ships, however, launching rescue craft may only be an option in reasonably good weather conditions. It is the best effective and convenient way to conduct recovery operation by approaching those in distress directly. In moderate sea conditions or worse, launch and recovery may be too hazardous, putting your own crew into danger. The use of your own rescue craft must be for the master to decide, depending on the capability of rescue boat and sea conditions of the incident.

6.4 Getting people aboard the ship

6.4.1 Factors to consider while getting people aboard the ship include but not limited to:

.1 the prevailing weather and sea conditions;

.2 the condition of the people to be recovered;

.3 the size of recovery ship;

.4 capability of recovery ship;

.5 the equipment available;

.6 the competency of those using it; and

.7 the best embarkation point. The embarkation point is to be at a position clear of the ship's propellers and, as far as practicable, within the ship's parallel mid-body section or at the hull

openings, away from bow and stern. Sufficient illumination and, where necessary, a source of power is to be available for the area of the embarkation point.

6.4.2 Factors to consider while getting people aboard the ship from the embarkation point by lifting or climbing include (to be prepared on the basis of the ship's actual provision):

.1 Pilot ladders and lifts, accommodation ladders, survival craft embarkation ladders and other ladders and nets are to be used to get people aboard the ship. The ladders and nets are to be so arranged that their lower ends are weighted so as to hang about two metres below the water level, enabling people in the water to get onto them.

.2 People may not be able to make the climb. In such circumstances a crew member from the recovering ship, wearing personal protective equipment and a safety line, may have to go down to assist.

.3 The ship's lifting devices (cranes, derricks, stores cranes), davits and winches may be considered for lifting those recovered aboard the ship. Lifting devices are to be rigged so that those recovered can be lifted clear of hazards and landed on deck in a safe area. The lower end of the lift is to be equipped with at least a rescue strop or a secure loop and control lines are to be rigged, so that the stability of the device is enhanced and harm to those recovered due to swinging against the ship's side can be avoided.

.4 Priority is to be given to the use of dedicated rescue equipment such as rescue nets and rescue baskets, which is the most effective and safest means. The crew is to operate the equipment correctly and skillfully according to the instructions of the equipment.

.5 Liferafts and lifeboats, left on the falls, may be used as lifts in relatively good conditions. Lowering these units to water level enables people to be transferred from survival craft and lifted to the recovering ship's embarkation deck. It is to be noted that any quick-release gear is to be disabled and overloading is not allowed.

.6 Ships fitted with marine evacuation systems of the slide type can deploy them. Slide equipped with handrails or ladders may aid in climbing up the slide. Winches can be rigged so that people may be hauled up the slide on lines, secured by rescue strops or loops.

6.4.3 Following measures are to be taken to minimize risk of harm to recovery personnel and people in the water during the recovery operation:

.1 To manoeuvre your own ship to prevent the recovery target being run down, crushed, capsized or swamped by the recovery ship.

.2 Try to keep sufficiently off the wind to reduce the ship's roll and pitch and to create a lee.

.3 A liferaft can be deployed at the foot of the ladder or net, to act as a transfer platform.

.4 Fenders are to be rigged in the embarkation area to minimize the harm to the recovered people due to swinging against the ship's side.

.5 When lifting people, safety lines are always to be used to secure the casualty in case he/she is injured and/or falls and control lines are to be rigged to the hoist and tended in an effort to minimize swinging.

.6 People who have been in the water, the injured and the incapable, are to be lifted in a horizontal or near-horizontal position if possible (for example, in a basket, or in two strops; one under the arms, the other under the knees). Recovery in a vertical position is to be avoided whenever possible as it risks cardiac arrest in hypothermic casualties.

6.5 Shelter and care of people recovered

6.5.1 The recovered people are to be transferred to a safe shelter as soon as possible and care medical supplies are to be provided by a dedicated person after they are aboard.

6.5.2 Information on persons in distress are to be asked from those conscious survivors as far as possible since the information they know may provide more help for the recovery operation. The master and on-scene operation commander are to be informed of the information known in time.

6.5.3 References are to be made to Appendix 3 "Guide for Cold Water Survival (MSC.1/Circ.1185/Rev.1)" and Section 2 of Volume III of International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual on "Care of Survivors" as set out in Appendix 4 for the guidance for care and appropriate first-aids of the recovered people. Free medical guidance may also be provided by TMAS which may be contacted through Rescue Co-ordination Centre (RCC).

6.5.4 Plans for handling of bodies of deceased people are to be kept onboard the ship. Reference is to be made for the specific operation to Section 2 of Volume III of International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual on "Handling of Deceased Persons" as set out in Appendix 4.

6.6 Standing by when people cannot be recovered

When recovery cannot be attempted or completed without unduly endangering the ship due to bad weather or other reasons, the master has the right to decide to terminate the recovery operation, and care and assistance are still to be given to those in distress within the capabilities of the ship until other help arrives or weather conditions improve. The following measures are to be taken by the master to assist people in the water:

.1 providing updated and detailed reports on the situation to local Rescue Co-ordination Centre (RCC);

.2 if possible, using throwing rockets or heaving lines to pass lines to boats, rafts to be rescued and towing the boats or rafts to a safe position;

.3 creating a lee for people in the water with your own ship;

.4 posting sufficient look-outs to keep people in the water in sight;

.5 establishing communications with people in the water as far as possible to provide them with comfort;

.6 providing life-saving equipment to people in the water as far as possible, such as lifebuoys, liferafts, medical supplies, water and food;

.7 assisting other recovery units in the recovery operation.