*Berit* Bridge Operation - extract from SMS Shipboard Main Manual

## 7.1 BRIDGE OPERATION

The competence and vigilance of the officer on watch provide the most direct means of avoiding dangerous situations.
To ensure this, the vessel should have on board the **Bridge Procedures Guide (ICS)** and personnel should make themselves familiar with this.
Procedures have to follow the relevant checklists as a **guideline.**
The Master ensures that the procedures are known to all concerned personnel and are in use during respective operation.

Following Checklists are available:

- **Preparation for Sea –Outbound-** **F07.101**
- **Embarkation / Disembarkation of Pilot + Master / Pilot Information Exchange** **F07.102**
- **Preparation for Arrival in Port –Inbound-** **F07.103**
- **Changing Over the Watch** **F07.104**

Nautical officers have to report completion of checklist and remarks, if any, into the logbook.

Following procedures are available as standing orders and can be increased by the Master:

- Navigation, Deep Sea
- Navigation, Coastal Waters
- Anchoring and Anchor Watch
- Restricted Visibility
- Navigating in Heavy Weather or in Tropical Storm Areas
- Navigating in Ice

All nautical officers have to sign these orders when sign on.

# Passage Planning - extracts from International Chamber of Shipping - Bridge Procedures Guide

# 2.3 Notes on passage planning

## 2.3.1 Plan appraisal

Before planning can commence, the charts, publications and other information appropriate for the voyage will need to be gathered together and studied. A passage appraisal checklist is included in this Guide as bridge checklist B5.

## 2.3.2 Charts and publications

Only official nautical charts and publications should be used for passage planning, and they should be fully corrected to the latest available notices to mariners and radio navigation warnings. Any missing charts and publications needed for the intended voyage should be identified from the chart catalogue and obtained before the ship sails (see sections 4.9.2 and 4.9.3).

For coastal and pilotage planning and for plotting each course alteration point (or waypoint) large scale charts should be used. For ocean passage planning and open water legs smaller scale charts should be used.

## 2.3.3 The route plan

The route plan should incorporate the following details:

- planned track showing the true course of each leg;
- leg distances;
- any speed changes required en route;
- wheel over positions for each course alteration, where appropriate;
- turn radius for each course alteration, where appropriate;
- maximum allowable off-track margins for each leg.

At any time during the voyage, the ship may need to leave the planned route temporarily at short notice. Marking on the chart relatively shallow waters and minimum clearing distances in critical sea areas is but one technique which will assist the OOW when having to decide quickly to what extent to deviate without jeopardising safety and the marine environment. However, in using this technique, care should be taken not to obscure chart features. On paper charts, only pencil should be used.

The route plan should also take into account the need to monitor the ship's position along the route, identify contingency actions at waypoints, and allow for collision avoidance in line with the COLREGS.

The main details of the route plan should be recorded using sketches, if appropriate, so that the plan can be readily referred to at the main conning position.

## 2.3.4 Passage planning and electronic navigation systems

### 2.3.4.1 Planning using electronic chart display systems

Passage planning can be undertaken either on paper charts or using an electronic chart display and information system (ECDIS) displaying electronic navigational charts (ENC), subject to the approval of the flag state administration. Raster chart display systems (RCDS) displaying raster navigational charts (RNC) can be used for passage planning in conjunction with paper charts (see section 4.9).

When passage planning using ECDIS, the navigating officer should be aware that a safety contour can be established around the ship. The crossing of a safety contour, by attempting to enter water which is too shallow or attempting to cross the boundary of a prohibited or specially defined area such as a traffic separation zone, will be automatically indicated by the ECDIS while the route is both being planned and executed.

When passage planning using a combination of electronic and paper charts, particular care needs to be taken at transition points between areas of electronic and paper chart coverage. The voyage involves distinct pilotage, coastal and ocean water phases. Planning within any one phase of the voyage should be undertaken using either all electronic or all paper charts rather than a mix of chart types.

Where a passage is planned using paper charts, care should be taken when transferring the details of the plan to an electronic chart display system. In particular, the navigating officer should ensure that:

- positions are transferred to, and are verified on, electronic charts of an equivalent scale to that of the paper chart on which the position was originally plotted;
- any known difference in chart datum between that used by the paper chart and that used by the electronic chart display system is applied to the transferred positions;
- the complete passage plan as displayed on the electronic chart display system is checked for accuracy and completeness before it is used.

### 2.3.4.2 Transferring route plans to other navigation aids

Care must be taken when transferring route plans to electronic navigation aids such as GPS, since the ship's position that is computed by the navaid is likely to be in WGS84 datum. Route plans sent to the GPS for monitoring cross track errors must therefore be of the same datum.

Similarly in the case of radars, routes and maps displayed on the radar will be referenced to the position of the ship. Care must therefore be taken to ensure that maps and plans transferred to, or prepared on, the radar are created in the same datum as the navaid (typically a GPS) which is connected to, and transmitting positions to, the radar.

## 2.5 Notes on passage planning in coastal or restricted waters

By comparison with open waters, margins of safety in coastal or restricted waters can be critical, as the time available to take corrective action is likely to be limited.

The manoeuvring characteristics of the ship and any limitations or peculiarities that the ship may have, including reliability problems with its propulsion and steering systems, may influence the route selected through coastal waters. In shallow water, particularly if the ship is operated at speed, ship squat can reduce underkeel clearances.

Ships' routeing schemes and reporting systems along the route, as well as vessel traffic services, should be taken into account (see sections 2.7, 2.8 and 2.9).

Coastal weather bulletins, including gale warnings and coastal navigational warnings broadcast by coast radio stations and NAVTEX, may require changes to be made to the route plan.

## 2.5.1 Monitoring the route plan

It is important that when a route is planned through coastal or restricted waters, due consideration is given to ensuring that the progress of the ship can be effectively monitored.

Of particular importance is the need to monitor the position of the ship approaching the wheel over position at the end of a track, and checking that the ship is safely on the new track after the alteration of course.

Distinctive chart features should be used for monitoring the ship's position visually, by radar and by echo sounder, and therefore need to be an integral part of the route plan.

### 2.5.1.1 Visual monitoring techniques

Ahead, transits can provide a leading line along which a ship can safely steer. Abeam, transits provide a ready check for use when altering course. At anchor, several transits can be used to monitor the ship's position.

Bearing lines can also be effectively used. A head mark, or a bearing line of a conspicuous object lying ahead on the track line, can be used to steer the ship, while clearing bearings can be used to check that a ship is remaining within a safe area.

### 2.5.1.2 Radar monitoring techniques

When radar conspicuous targets are available, effective use can be made of radar clearing bearings and ranges.

Ships with good arthwartship track control can use clearing bearings to monitor the advance of a ship towards a wheel over position, while parallel indexing can be used to check that the ship is maintaining track and not drifting to port or starboard. For details on radar and navigation, refer to section 4.2.3 of this Guide.

# *Berit* Bridge Operation Standing Orders

## NAVIGATING IN HEAVY WEATHER 0R IN TROPICAL STORM AREAS

1. Have the following been informed?
   the master
   the engineroom
   the crew
2. Have all moveable objects been secured at the following locations?
   on deck
   below deck
   ports, deadlights
3. Have speed and course been adjusted as necessary?
4. Has the crew been warned to avoid upper deck areas made dangerous by the weather?
5. Have safety lines / hand ropes been rigged where necessary?
6. Have instructions been issued on the following matters?
   monitoring weather reports
   transmitting weather reports to the appropriate authorities or, in the case of tropical storms, danger messages in accordance with SOLAS 1974 Chapter V, Regulation 2(a)

## NAVIGATING IN ICE

1. Have the following been informed of the ice conditions?
   - the master
   - the engineroom
   - the crew
2. Have watertight doors been shut, as appropriate?
5. Have speed been adjusted (N.B. momentum varies as the square of the ship's speed)?
6. Have instructions been issued on the following matters?
   - monitoring ice advisory service broadcasts
   - transmitting danger messages in accordance with
   - SOLAS 1974 Chapter V, Regulation 2(a)?
5. Have safety lines / hand ropes been rigged where necessary?
6. Have instructions been issued on the following matters?
   - monitoring weather reports
   - transmitting weather reports to the appropriate authorities or, in the case
   - of tropical storms, danger messages in accordance with
   - SOLAS 1974 Chapter V, Regulation 2(a)

## Daily Tests and Checks

1. Bridge and engineroom telegraphs
2. Revolution, pitch and rudder position indicators
3. Bridge telephones
4. Communication equipment
5. Clocks and chronometers
6. Navigation light panel
7. General emergency alarm signal
8. Navigation equipment incl. Weather fax and Navtex
9. Ship's whistle ( but not in poor visibility or when other vessels are nearby )
10. Steering gear changeover procedure
11. Engine – Bridge control monitoring equipment
12. Smoke detector

## NAVIGATION, DEEP SEA

1. Have all charts and nautical publications to be used been corrected up to date?
2. Have the factors been taken into Consideration in preparing the passage plan?
3. Are Navarea warning broadcasts being monitored?
4. Is participation in area reporting systems (e.g. AMVER) recommended?
5. Is the ship's position being fixed at regular intervals and at least every hour?
6. Are the errors of gyro/magnetic compasses being checked once a watch?
7. Are the GPS Navigator setting up (chart datum, greatcircle navigation etc.)?
8. Are the Autopilot Alarm (rudder limit) being checked once a day?
9. Are the Pilot Alarm switched on from sunrise to sunset (Deadman Alarm)?
10. Are fire and smoke detection system running?
11. Are the Engine – Bridge Alarm on (stop main engine, slow down main engine, failure of steering gear, overload and phase failure of steering gear)?
12. If the machinery space unattended, is the engineers call system switched on?

## NAVIGATION, COSTAL WATERS / TRAFFIC SEPARATION SCHEMES

1. Have all charts and nautical publications to be used been corrected up to date?
2. Have the following factors been taken into consideration in preparing the passage plan?
   - advice/recommendations in sailing directions
   - ship's draught
   - effect of "squat" on underkeel clearance in shallow water
   - tides and currents
   - weather, particularly in areas renowned for poor visibility
   - available navigational aids and their accuracy
   - position-fixing methods to be used
   - daylight/night-time passing of danger points
   - traffic likely to be encountered - flow, type, volume
   - any requirements for traffic separation / routeing schemes
3. Are local / coastal warning broadcasts being monitored?
4. Is participation in area reporting systems recommended?
5. Have courses been laid off well clear of obstructions?
6. Is the ship's position being fixed at regular intervals?
7. Are the errors of gyro / magnetic compasses being checked regularly?

# MCA voyage planning guidance (Annex 24 of MCA publication 'Safety of Navigation, Implementing SOLAS Chapter V, 2002')

# Annex 24 - Voyage Planning

The Annex to IMO Resolution A.893(21) (See ANNEX 25), "Guidelines for Voyage Planning", should be followed on all vessels. The key elements of the Voyage Plan are:

**Appraising** all relevant information
**Planning** the intended voyage
**Executing** the plan taking account of prevailing conditions
**Monitoring** the vessel's progress against the plan continuously

These notes should be read in conjunction with the IMO Guidelines for Voyage Planning.

**1.) General**

Investigations show that human error contributes to 80% of navigational accidents and that in many cases essential information that could have prevented the accident was available to but not used by those responsible for the navigation of the vessels concerned. Most accidents happen because of simple mistakes in use of navigational equipment and interpretation of the available information, rather than because of any deficiency in basic navigational skills or ability to use equipment.

Masters, skippers and watchkeepers should therefore adhere to the IMO Guidelines taking the following measures to ensure that they appreciate and reduce the risks to which they are exposed:

**a)** ensure that all the vessel's navigation is planned in adequate detail with contingency plans where appropriate;

**b)** ensure that there is a systematic bridge organisation that provides for:

**i)** comprehensive briefing of all concerned with the navigation of the vessel;

**ii)** close and continuous monitoring of the vessel's position ensuring as far as possible that different methods of determining the position are used to check against error in any one system;

**iii)** cross-checking of individual human decisions so that errors can be detected and corrected as early as possible;

**iv)** information available from plots of other traffic is used carefully to ensure against over-confidence, bearing in mind that other vessels may alter course and/or speed

**c)** ensure that optimum and systematic use is made of all appropriate information that becomes available to the navigational staff; and

**d)** ensuring that the intentions of a pilot are fully understood and acceptable to the vessel's navigational staff.

**2.) Responsibility for Voyage planning**

In most deep-sea vessels the master delegates the initial responsibility for preparing the plan for a voyage to the officer responsible for navigational equipment and publications (hereafter referred to as the navigating officer.) On smaller vessels, including fishing vessels, the master or skipper may have the responsibility of the navigating officer for voyage planning purposes. Prior to departure the navigating officer will prepare the detailed voyage plan from berth to berth in accordance with the Guidelines and to the master's requirements. If the port of destination is not known or is subsequently altered, the navigating officer must extend or amend the original plan as appropriate.

**3.) Principles of Voyage planning**

The four stages of Appraisal, Planning, Execution and Monitoring logically follow each other. An appraisal of all information available must be made before detailed plans can be drawn up and a plan must be in existence before tactics for its execution can be decided upon. Once the plan and the manner in which it is to be executed have been decided, monitoring must be carried out to ensure that the plan is followed.

**4.) Appraisal** is the process of gathering all information relevant to the proposed voyage, including ascertaining risks and assessing its critical areas. The Guidelines list the items that should be taken into account.

An overall assessment of the intended voyage should be made by the master, in consultation with the navigating officer and other deck officers who will be involved, after all relevant information has been gathered. This appraisal will provide the master and his bridge team with a clear and precise indication of all areas of danger, and delineate the areas in which it will be possible to navigate safely taking into account the calculated draught of the vessel and planned under-keel clearance. Bearing in mind the condition of the vessel, her equipment and any other circumstances, a balanced judgement of the margins of safety which must be allowed in the various sections of the intended voyage can now be made, agreed and understood by all concerned.

Once a full appraisal has been carried out the navigating officer carries out the **Planning** process, acting on the master's instructions. The detailed plan should cover the whole voyage, from berth to berth, and include all waters where a pilot will be on board. The plan should be completed and include all the relevant factors listed in the Guidelines.

The appropriate charts should be marked clearly showing all areas of danger and the intended track taking into account the margins of allowable error. Where appropriate, due regard should be paid to the need for advanced warning to be given on one chart of the existence of a navigational hazard immediately on transfer to the next. The planned track should be plotted to clear hazards at as safe a distance as circumstances allow. A longer route should always be accepted in preference to a shorter more hazardous route. The possibility of main engine or steering gear breakdown at a critical moment must not be overlooked.

Additional information which should be marked on the charts include:

- All radar-conspicuous objects and RACONs, which may be used in radar position fixing.

- Any transit marks, clearing bearings or clearing ranges (radar) which may be used to advantage. It is sometimes possible to use two conspicuous clearing marks where a line drawn through them runs clear of natural dangers with the appropriate margin of safety; if the vessel proceeds on the safe side of this transit she will be clear of the danger. If no clearing marks are available, a line or lines of bearing from a single object may be drawn at a desired safe distance from the danger; provided the vessel remains in the safe segment, it will be clear of the danger. Parallel index lines should also be drawn where appropriate.

If an electronic chart system is used to assist voyage planning the plan should also be drawn up on the paper charts. Where official (ENC) vector data is available an ECDIS provided with fully compliant ENC data for the vessel's voyage may be used instead of paper charts. Raster Chart Display Systems (RCDS) using official and up to date Raster charts can be used in conjunction with paper charts to assist voyage planning and route monitoring. Hazards should be marked on the RCDS as well as on the paper chart. Systems that use unofficial chart data should not be used for voyage planning or navigation.

Depending on circumstances, the main details of the plan should be marked in appropriate and prominent places on the charts to be used during the voyage. They should also be programmed and stored electronically on an ECDIS or RCDS where fitted. The main details of the voyage plan should also be recorded in a bridge notebook used specially for this purpose to allow reference to details of the plan at the conning position without the need to consult the chart. Supporting information relative to the voyage, such as times of high and low water, or of sunrise or sunset, should also be recorded in this notebook.

It is unlikely that every detail of a voyage will have been anticipated, particularly in pilotage waters. Much of what will have been planned may have to be adjusted or changed after embarking the pilot. This in no way detracts from the real value of the plan, which is to mark out in advance, areas where the vessel must not go and the appropriate precautions which must be taken, and to give initial warning that the vessel is standing into danger.

**5.) Execution** of the finalised the voyage plan should be carried out taking into account the factors listed in the Guidelines. The Master should take into account any special circumstances which may arise, such as changes in weather, which may require the plan to be reviewed or altered.

**6.) Monitoring** of the vessel's progress along the pre-planned track is a continuous process. The officer of the watch, whenever in any doubt as to the position of the vessel or the manner in which the voyage is proceeding, should immediately call the master and, if necessary, take appropriate action for the safety of the vessel.

The performance of navigational equipment should be checked prior to sailing, prior to entering restricted or hazardous waters and at regular and frequent intervals at other times throughout the voyage.

Advantage should be taken of all the navigational equipment with which the vessel is fitted for position monitoring, bearing in mind the following points:

**a.)** positions obtained by electronic positioning systems must be checked regularly by visual bearings and transits whenever available;

**b.)** visual fixes should, if possible, be based on at least three position lines;

**c.)** transit marks, clearing bearings and clearing ranges (radar) can be of great assistance;

**d.)** it is dangerous to rely solely on the output from a single positioning system;

**e.)** the echo sounder provides a valuable check of depth at the plotted position;

**f.)** buoys should not be used for position fixing but may be used for guidance when shore marks are difficult to distinguish visually; in these circumstances their positions should first be checked by other means;

**g.)** the charted positions of offshore installations should be checked against the most recent navigational notices;

**h.)** the functioning and correct reading of the instruments used should be checked;

**i.)** account must be taken of any system errors and the predicted accuracy of positions displayed by electronic position fixing systems; and

**j.)** the frequency at which the position is to be fixed should be determined for each section of the voyage.

Each time the vessel's position is fixed and marked on the chart in use, the estimated position at a convenient interval of time in advance should be projected and plotted. With ECDIS or RCDS care should be taken to ensure that the display shows sufficient "look-ahead" distance and that the next chart can be readily accessed.

Radar can be used to advantage in monitoring the position of the vessel by the use of parallel indexing, which is a simple and most effective way of continuously monitoring that a vessel is maintaining its track in restricted coastal waters. Parallel indexing can be used in any situation where a radar-conspicuous navigation mark is available and it is practicable to monitor continuously the vessel's position relative to such an object. It also serves as a valuable check on the vessel's progress when using an electronic chart.

**7.) Pilotage**

The Plan covers the voyage from berth to berth and therefore includes the Pilotage stage. The IMO Guidelines do not give specific advice on this important stage therefore the following notes should be taken into consideration when planning and executing the pilotage stages.

Pilots make a significant contribution to the safety of navigation in the confined waters and port approaches of which they have up to date knowledge, but it must be stressed that the responsibilities of

the vessel's navigational team and the officer of the watch do not transfer to the pilot. After boarding the vessel, in addition to being advised by the master of the manoeuvring characteristics and basic details of the vessel for its present condition, the pilot should be clearly consulted on the voyage plan to be followed. The general aim of the master should be to ensure that the expertise of the pilot is fully supported by the vessel's bridge team.

Attention is drawn to the following extract from IMO Resolution A.285 (VIII):

"Despite the duties and obligations of a pilot, his presence on board does not relieve the officer of the watch from his duties and obligation for the safety of the vessel. He should co-operate closely with the pilot and maintain an accurate check on the vessel's position and movements. If he is in any doubt as to the pilot's actions or intentions, he should seek clarification from the pilot and if doubt still exists he should notify the master immediately and take whatever action is necessary before the master arrives."

**8.) Other publications**

In addition to the IMO Guidelines mariners are also referred to the following publications which contain valuable advice on bridge watchkeeping in general and voyage planning in particular:

*"Bridge Team Management - A practical guide"* published by the Nautical Institute and

*"Bridge Procedures Guide"* published by the International Chamber of Shipping

MGN 315 (M) Keeping a Safe Navigational Watch on Merchant Vessels, published February 2006

Maritime and Coastguard Agency

**MARINE GUIDANCE NOTE**

MGN 315 (M)

# KEEPING A SAFE NAVIGATIONAL WATCH ON MERCHANT VESSELS

**Notice to Owners, Operators, Managers, Masters and Officers of Merchant Vessels**

*This notice should be read in conjunction with MGN 137 (M+F) and MGN 202 (M+F)*


**Summary**

This Merchant Guidance Notice (MGN) gives guidance on the application of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended (**STCW 95**)[1] regarding the keeping of a safe navigational watch.

**Key Points**

This notice gives information and guidance on the keeping and maintaining of a safe navigational watch in accordance with the requirements of STCW 95 and its associated code (**STCW Code**).

The areas that this notice covers are:
General application for Masters and officers in charge of a navigational watch;
Fitness for duty;
Performing the navigational watch;
Watch arrangements, handing over the watch and taking over the watch;
Maintaining a safe look-out and relationship with the look-out;
Restricted visibility, safe speed, stopping distance and vessel at anchor;
Certification.


## 1.0 Introduction

1.1 This notice contains guidance for officers in charge of a navigational watch, which Masters are expected to supplement as they consider appropriate. It is essential that officers of the watch (**OOW**) appreciate that the proper performance of their duties is necessary in the interests of the safety of life and property at sea and the prevention of pollution to the marine environment.

[1] Available from the Publications Department, International Maritime Organisation, 4 Albert Embankment, London SE1 7SR

1.2 It is the responsibility of Masters, and companies owning or operating UK registered seagoing vessels, to ensure that the principles applying to the keeping of a safe watch, as detailed in STCW 95 are followed.

1.3 The Master shall not be constrained by the shipowner, charterer or any other person from taking any decision which, in the Master's professional judgment, is necessary for safe navigation. It is the duty of the Master of every vessel to ensure that watchkeeping arrangements are adequate for maintaining a safe navigational watch at all times.

1.4 The International Chamber of Shipping (**ICS**) Bridge Procedures Guide is established as the principle guide to best watchkeeping practice and includes additional guidance on bridge resource management and the conduct of the bridge team including the use of passage planning, integrated electronic navigation systems and the use of GMDSS.

1.5 This notice, which should be read in conjunction with STCW 95 and ICS Bridge Procedures Guide, highlights the Maritime and Coastguard Agency (**MCA**) concerns and interpretations with respect to what constitutes the 'Keeping of a Safe Navigational Watch' in the light of recent maritime accidents and incidents.

1.6 The Annex to this notice lists relevant publications.

## 2.0 General

2.1 The OOW is the Master's representative and is primarily responsible at all times for the safe navigation of the vessel and for complying with the International Regulations for Preventing Collisions At Sea (**ColRegs**).

2.2 It is of special importance that the OOW ensures that at all times an efficient look-out is maintained and that ColRegs are complied with.

2.3 Officers and Masters are reminded that the vessel must at all times proceed at a safe speed.

2.4 The vessel's engines are at the disposal of the OOW and there should be no hesitation in using them in case of need. Where possible, timely notice of intended variations of engine speed should be given to the duty engineer. The OOW should know the handling characteristics of the vessel, including the stopping distance, and should appreciate that other vessels may have different handling characteristics.

2.5 Officers in charge of a navigational watch are responsible for navigating the vessel safely during their periods of duty with particular concerns for avoiding collision and stranding. The OOW shall also be aware of the serious effects of operational or accidental pollution of the marine environment and shall take all possible precautions to prevent such pollution.

2.6 Masters, owners and operators are reminded that the MCA considers it dangerous and irresponsible for the OOW to act as sole look-out during periods of darkness or restricted visibility.

2.7 The factors to be considered before the dedicated bridge look-out can be dispensed with are detailed in paragraph 8.3. It is implicit in STCW 95 that at all times when a ship is underway a separate dedicated look-out must be kept in addition to the OOW.

## 3.0 Fitness for Duty

3.1 The Merchant Shipping (Hours of Work) Regulations 2002 (**the Regulations**) apply to all seafarers employed or engaged in any capacity on board a seagoing vessel and includes officers and ratings assigned to bridge watchkeeping duties.

3.2 In summary, and unless covered by an exception, the Regulations provide for a minimum of 10 hours rest in any 24 hour period and 77 hours in any seven day period.

Hours of rest may be divided into no more than two periods, one of which should be at least six hours long, and the intervals in between should not exceed 14 hours.

3.3 The watch system shall be such that the efficiency of watchkeeping personnel is not impaired by fatigue. The Master shall take into account the quality and quantity of rest taken by the watchkeepers when determining fitness for duty.

3.4 It is the overall responsibility of the Master and the responsibility of every watchkeeping officer and rating to ensure that they are sufficiently rested prior to taking over a navigational watch. It is the responsibility of the owner or operator to ensure that the vessel is manned with a sufficient number of personnel so that a safe navigational watch can be maintained at all times by appropriately qualified and rested personnel in all foreseeable circumstances.

3.5 In circumstances where the Regulations cannot be met there should be established procedures and contingencies in place to ensure that the vessel is brought to or remains in a place of safety until a safe navigational watch can be established. In some circumstances this may require delay to a vessel's departure.

3.6 Watchkeepers should ensure they remain alert by moving around frequently and ensuring good ventilation. Marine Accident Investigation Branch (**MAIB**) reports have shown that it is all too easy to fall asleep, especially while sitting down in an enclosed wheelhouse.

3.7 The OOW shall be free from the effects of alcohol and any other substance, including prescription drugs or other medication that may have a detrimental effect on the officer's judgments.

**4.0 Performing the Navigational Watch**

4.1 The officer of the navigational watch shall:

- keep the watch on the bridge
- in no circumstances leave the bridge until properly relieved by an appropriate officer
- continue to be responsible for the safe navigation of the vessel despite the presence of the Master on the bridge until informed specifically that the Master has assumed the con and this is mutually understood
- notify the Master when in any doubt as to what action to take in the interests of safety
- continue to be responsible for the safe navigation of the vessel despite the presence of a pilot on board
- if in any doubt as to the pilot's actions or intentions, seek clarification from the pilot; if doubt still exists, they should notify the Master immediately and take whatever action is necessary until the Master arrives
- not undertake any other duties that would interfere or compromise the keeping of a safe navigational watch
- ensure there are no distractions caused by the use of domestic radios, cassettes, CD players, personal computers, television sets, mobile phones, etc
- have available at all times, the services of a qualified helmsman

- in areas of high traffic density, in conditions of restricted visibility and in all hazardous navigational situations ensure the vessel is in hand steering

- keep in mind that the perceptions of watchkeeping officers on different types and sizes of vessels may vary considerably when assessing a close quarter situation and the time in which avoiding action should be taken

- keep a proper record during the watch on the movement and activities relating to the navigation of the vessel

- station a person to steer the vessel and to put the steering into manual control in good time to allow any potentially hazardous situation to be dealt with in a safe manner. Officers are further reminded that when the vessel is in automatic steering it is highly dangerous to allow a situation to develop to the point where the OOW is without assistance and has to break the continuity of the look-out in order to take emergency action

- use the radar at all times in areas of high traffic density and whenever restricted visibility is encountered or expected and shall have due regard to its limitations. Radar should be available for use at all times to enable the officers to use the equipment in clear weather so as to fully appreciate the limitations of the equipment

- at sufficiently frequent intervals during the watch check the vessel's position, course and speed using all appropriate navigational aids and means necessary to ensure that the vessel follows the planned track

- take fixes at frequent intervals. These fixes shall be carried out by more than one method whenever circumstances allow. The largest scale chart on board, suitable for the area and corrected with the latest available information shall be used. This includes local navigation warnings, and temporary and preliminary notices to mariners

Mariners are also reminded of the requirement to use the latest editions of all supporting navigational publications such as charts, list of lights, list of radio signals, pilot books etc. Such publications should be fully corrected.

**5.0 Watch Arrangements**

5.1 The composition of a navigational watch should comprise one (or more) qualified officers supported by appropriately qualified ratings. The actual number of officers and ratings on watch at a particular time will depend on the prevailing circumstances and conditions.

5.2 At no time shall the bridge be left unmanned without a qualified watchkeeping officer.

5.3 Factors to be taken into account when composing a bridge watch:

- fatigue

- weather conditions and visibility

- proximity of navigational hazards which may make it necessary for the officer in charge of the watch to carry out additional navigational duties

- use and operational condition of navigational aids

- whether the vessel is fitted with automatic steering

- whether there are radio duties to be performed

- unmanned machinery space (**UMS**) alarms, controls and indicators provided on the bridge, procedures for their use and limitations
- any unusual demands on the navigational watch that may arise as a result of special operational circumstances

In circumstances where a single man bridge is considered permissible support personnel should be readily and immediately available should assistance be required. There should be an established and continuously available means of communications for the watchkeeper to summon such assistance at all times.

**6.0 Handing Over the Watch**

6.1 The OOW shall:

- ensure that the members of the relieving watch are fully capable of performing their duties
- ensure that the vision of the relieving watch is fully adjusted to the light conditions
- ensure that all standing orders and the Master's night orders are fully understood

6.2 The OOW shall not hand over the watch:

- if there is reason to believe that the relieving officer is not capable of carrying out the watchkeeping duties effectively, in which case the Master should be notified
- when a manoeuvre is in progress until such action has been completed

**7.0 Taking Over the Watch**

7.1 The relieving officer shall:

- prior to taking over the watch verify the vessel's estimated or true position
- confirm the vessel's intended track, course and speed
- note any dangers to navigation expected to be encountered during the watch
- be aware of prevailing and predicted tides, currents, weather, visibility and the effect of these factors upon course and speed
- note any errors in gyro and magnetic compasses
- note the status of all bridge equipment
- note the settings of bridge/engine controls and manning of engine room
- be aware of the presence and movement of vessels in sight or known to be in the vicinity
- give watchkeeping personnel all appropriate instructions and information which will ensure the keeping of a safe navigational watch, including maintenance of a proper look-out

## 8.0 Look-out

8.1 The ColRegs require that every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of risk of collision.

8.2 The look-out must be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken that could interfere with that task. The duties of the look-out and helmsman are separate and the helmsman should not be considered to be a look-out except in small vessels where an un-obstructed all round view is provided at the steering position and there is no impairment of night vision or other impediment to the keeping of a proper look-out.

8.3 In certain circumstances of clear daylight conditions the Master may consider that the OOW may be the sole look-out. On each occasion the Master should ensure that:

- The prevailing situation has been carefully assessed and it has been established without a doubt that it is safe to do so;
- Full account has been taken of all relevant factors including but not limited to:
    - state of the weather
    - visibility
    - traffic density
    - proximity of dangers to navigation
    - the attention necessary when navigating in or near traffic separation schemes
    - design and layout of the bridge
    - arcs of visibility
    - radar equipment fitted and their limitations with respect to navigation
    - other duties that the officer may have to engage in and which could be a distraction from the keeping of a proper look-out such as:
        - operation of GMDSS and other communications equipment such as cell phones and email systems
        - navigational maintenance such as completion of logs and other record keeping and correction of charts and publications
        - routine testing and maintenance of bridge equipment

In any event, an OOW acting as sole look-out should always be able to fully perform both the duties of a look-out and those of keeping a safe navigational watch. Assistance must be immediately available to be summoned to the bridge when any change in the situation so requires.

8.4 It is of special importance that at all times the officer in charge of the navigational watch ensures that a proper look-out is maintained. In vessels with a separate chartroom the officer in charge of the navigational watch may visit the chartroom, when essential, for a short period for the necessary performance of navigational duties, but shall first ensure that it is safe to do so and that a proper look-out is maintained.

## 9.0 Relationship Between the OOW and Look-out

9.1 The OOW should consider the look-out as an integral part of the Bridge Team and utilise the look-out to the fullest extent.

9.2 As a way of fully engaging the look-out's attention consideration should be given to keeping the look-out appraised of the current navigational situation with regard to expected traffic, buoyage, weather, landfall, pilotage and any other circumstance relevant to good watchkeeping.

## 10.0 In Restricted Visibility

10.1 When restricted visibility is encountered or expected, the first responsibility of the OOW is to comply with the ColRegs with particular regard to the keeping of a look-out, sounding of fog signals, proceeding at a safe speed and having the engines ready for immediate manoeuvre.

10.2 In addition the OOW shall:

- inform the Master
- ensure that a dedicated look-out is posted at all times
- exhibit navigation lights
- operate and use the radar
- put the engines on standby

## 11.0 Safe Speed and Stopping Distance

11.1 The ColRegs require that every vessel shall at all times proceed at a safe speed so that proper effective action can be taken to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.

11.2 In cases of need, the OOW shall not hesitate to use the engines to reduce speed further and allow more time for consideration and assessment of a developing situation. However, timely notice of the intended variations of engine speed shall be given to the engineers where possible or effective use made of UMS engine controls.

11.3 Whatever the pressure on Masters to make a quick passage or to meet the wishes of owners, operators, charterers or port operators, it does not justify vessels and those on board them being unnecessarily put at risk. The MCA is concerned that proper standards be maintained and will take appropriate action against officers who jeopardize their vessels or the lives and property of others. Such action may lead to fines and/or the suspension or cancellation of their certificates.

11.4 In the well known case of THE LADY GWENDOLEN, the Court of Appeal stated that "excessive speed in fog is a grave breach of duty and vessel owners should use their influence to prevent it." Because of their failure to do so, it was held in that case that the owners could not limit their liability.

## 12.0 Vessel at Anchor

12.1 The OOW shall:

- determine and plot the vessel's position on the appropriate chart as soon as practicable

- when circumstances permit, check at sufficiently frequent intervals whether the vessel is remaining securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects. The use of carefully chosen transits can give an almost instant indication as to whether the vessel's position has changed

- ensure that a proper look-out is maintained

- ensure that inspection rounds are made periodically

- observe meteorological and tidal conditions and state of sea, notify the Master and undertake all necessary measures if the vessel drags anchor

- ensure the state of readiness of the main engines and other machinery complies with the Masters requirements

- ensure the vessel exhibits the appropriate lights and shapes and that appropriate ColRegs sound signals are made

- avoid placing reliance on guard zones when using radar in lieu of a look-out as this is not considered acceptable practice.

In all the above circumstances it remains the Master's responsibility to ensure that the anchor watch to be kept is appropriate to the prevailing conditions.

**13.0 Certification**

13.1 The Regulations require that any officer in charge of a navigational watch shall be duly qualified in accordance with the requirements of STCW 95. It is the responsibility of the owner or operator, and Master to ensure that every navigational watchkeeping officer is appropriately qualified with respect to the size of the vessel and limitations in area of operation. Under no circumstances is it permitted for an un-qualified person to take charge of a navigational watch.

13.2 Similarly STCW 95 Section A-II/4 requires that every rating forming part of a navigational watch on a seagoing vessel of 500gt or more shall be required to demonstrate competence in the duties associated with the keeping of a safe navigational watch at the support level. This competence is evidenced by the issue of a Navigational Watch Rating Certificate. No rating should be assigned to navigational watchkeeping duties unless suitably qualified.

13.3 A qualification demonstrates that the holder has reached a minimum level of competence as defined in STCW 95. However, it does not imply that the holder has achieved all the necessary management or operational experience particular to a vessel, its operation or operational area. In considering an officer's or rating's qualifications due consideration should also be given to an individual's experience with respect to the vessel type and/or area of operation(s). In some circumstances it may be prudent to 'double-up' a watch or provide additional supervision to a qualified watchkeeper whilst particular operational experience is achieved.

## Further Information

Further information on the contents of this Notice can be obtained from:

Seafarer Training and Certification Branch
Maritime and Coastguard Agency
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel : +44 (0) 23 8032 9231
Fax : +44 (0) 23 8032 9252
e-mail: exams.section@mcga.gov.uk

General Inquiries: 24 Hour Infoline
infoline@mcga.gov.uk
0870 600 6505

MCA Website Address: www.mcga.gov.uk

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**Annex**

Mariner’s attention is drawn to the following publications relating to this notice:

- International Regulations for Preventing Collisions at Sea 1972 (ColRegs)
- STCW 95, Code Sections A-VIII/2 Part 3, 3-1,3-2 and A-II/4
- ICS Bridge Procedures Guide

MGN 299 (M+F) Interference with Safe Navigation Through Inappropriate Use of Mobile Phones, published October 2005

Maritime and Coastguard Agency

**MARINE GUIDANCE NOTE**

# MGN 299 (M + F)

# INTERFERENCE WITH SAFE NAVIGATION THROUGH INAPPROPRIATE USE OF MOBILE PHONES

**Notice to: Shipowners, Ship Operators, Charterers, Masters, Ships' Officers, Fishing and Leisure Vessel Skippers, Shipping Agents, Pilots, Port Authorities, Ship Chandlers, Tug Operators, Bunkering Providers etc**


**Summary**

There is growing concern that the use of mobile phones at inappropriate times is distracting Bridge Management Teams from their primary duties of navigating and conning their vessel

Key Points

- Interference, in this context, relates to the distraction caused by making or receiving mobile phone calls at inappropriate times during the conduct of the vessel's navigation and conning.
- Such activity is liable to demand the attention of bridge personnel when full attention should be devoted to the safe and efficient navigation of the vessel.
- Many individuals and organisations with business with the vessel, expect an instant response to their phone calls without being aware of the demands this places on the personnel responsible for the vessel's safe navigation.
- Ship operators are recommended to have procedures in place, in the vessel's safety management system, as part of International Safety Management (ISM) Code compliance, to regulate the usage of mobile phone on ships' bridges.
- Consideration should also be given to prohibiting all mobile phone usage when navigational requirements demand the individual attention of all those responsible for the safe conduct of the vessel.


## Introduction

1. Concerns have been raised with the Maritime and Coastguard Agency (MCA) in recent months about the use of mobile phones aboard ships and the subsequent interference with navigation.

Such interference is not related to difficulties of a technical kind but rather to the effect of mobile phones on navigation and conning of the vessel, by demanding the attention of bridge personnel, at inappropriate moments.

2. The MCA initially received anecdotal evidence via the Confidential Hazardous Information Reporting Programme (CHIRP)[1] but latterly this has been substantiated with the publication of the Marine Accident Investigation Branch (MAIB) Report[2] into the Grounding of the ATTILIO IEVOLI in the Western Solent, in June 2004.

3. The MAIB Report clearly states (Section 2.4.2) that a mobile phone was in use on the bridge for the majority of the time between the pilot disembarking and the vessel grounding. It further states that it was known that the Master made some, if not all, of the calls during this period. With the remainder of the bridge team unclear of their relative responsibilities for navigation, and the master distracted on the telephone, no one appeared to have been concentrating on the safety of the vessel.

4. On this particular subject, the Report calls for a restriction on the use of mobile phones in the approaches to a port, for both incoming and outgoing calls. This could be achieved by designating pilotage, and other restricted waters, as 'red zones', in which outgoing mobile telephone calls are prohibited, and incoming calls are diverted to a message service. Use of this technique, or similar control measures, ensures that mobile telephones are not a distraction for the bridge team at a time when they should be concentrating fully on the navigation of the vessel.

5. The ease of communications between ship and shore via mobile phones, in coastal and port approach areas, has resulted in excessive demands being placed, at times, on ships' masters and officers by having to deal with enquiries from a wide range of organisations and individuals who have business with the vessel. These include, but not necessarily limited to, the shipowners and operators themselves, charterers, chandlers, port officials and shipping agents.

6. Those with business with the ship should understand that they will be attempting to contact a working environment during times when safety critical operations may be undertaken. Calls should only be made to a ship when absolutely necessary and there should be no expectation of an instant response.

7. One of the Recommendations in the MAIB Report is directed at the International Chamber of Shipping (ICS) to encourage its member shipping companies to introduce a routine of limited use of mobile phones in pilotage and other restricted waters.

8. The MCA strongly endorses this Recommendation and encourages the development of a procedure to cover the use of mobile phones in such situations to be incorporated, where appropriate, into the vessel's safety management system, as part of International Safety Management (ISM) Code compliance.

9. Additionally, consideration should be given to the prohibition of all mobile phones from the bridges of ships when navigational requirements demand the individual attention of all those responsible for the safe conduct of the vessel when navigating, for example, in:

- Areas of high traffic density,
- Conditions of restricted visibility,
- The vicinity of offshore installations and other structures, or
- The approaches to ports, harbours or anchorages.

[1] http://www.chirp.co.uk
[2] www.maib.dft.gov.uk/publications/investigation_reports/2005/Attilio_Ievoli.cfm

10. In conclusion, there is a compelling need for clarity of purpose when conducting the safe navigation of a vessel which endorses the requirement for an active management policy for the use of mobile phones on the bridges of ships at all times, but especially when the navigation risks are higher.

**Further Information**

Further information on the contents of this Notice is available from the MCA at the address below.

Navigation Safety Branch
Maritime and Coastguard Agency
Spring Place
105 Commercial Road
Southampton
SO15 1EG

Tel : +44 (0) 23 8032 9145
Fax +44 (0) 23 8032 9204
e-mail: navigationsafety@mcga.gov.uk

General Inquiries: 24 Hour Infoline
infoline@mcga.gov.uk
0870 600 6505

MCA Website Address: www.mcga.gov.uk

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# International Safety Management Code (ISM Code) 1994 Edition

# International Safety Management Code

## PREAMBLE

**1** The purpose of this Code* is to provide an international standard for the safe management and operation of ships and for pollution prevention.

**2** The Assembly adopted resolution A.443(XI), by which it invited all Governments to take the necessary steps to safeguard the shipmaster in the proper discharge of his responsibilities with regard to maritime safety and the protection of the marine environment.

**3** The Assembly also adopted resolution A.680(17), by which it further recognized the need for appropriate organization of management to enable it to respond to the need of those on board ships to achieve and maintain high standards of safety and environmental protection.

**4** Recognizing that no two shipping companies or shipowners are the same, and that ships operate under a wide range of different conditions, the Code is based on general principles and objectives.

**5** The Code is expressed in broad terms so that it can have a wide-spread application. Clearly, different levels of management, whether shore-based or at sea, will require varying levels of knowledge and awareness of the items outlined.

**6** The cornerstone of good safety management is commitment from the top. In matters of safety and pollution prevention it is the commitment, competence, attitudes and motivation of individuals at all levels that determines the end result.

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* The International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code) comprises the annex to resolution A.741(18), the text of which is reproduced at the end of the present publication.

# 1 GENERAL

## 1.1 Definitions

**1.1.1** *International Safety Management (ISM) Code* means the International Management Code for the Safe Operation of Ships and for Pollution Prevention as adopted by the Assembly, as may be amended by the Organization.

**1.1.2** *Company* means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the shipowner and who, on assuming such responsibility, has agreed to take over all duties and responsibility imposed by the Code.

**1.1.3** *Administration* means the Government of the State whose flag the ship is entitled to fly.

## 1.2 Objectives

**1.2.1** The objectives of the Code are to ensure safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment, in particular to the marine environment and to property.

**1.2.2** Safety-management objectives of the Company should, *inter alia:*

- **.1** provide for safe practices in ship operation and a safe working environment;
- **.2** establish safeguards against all identified risks; and
- **.3** continuously improve safety-management skills of personnel ashore and aboard ships, including preparing for emergencies related both to safety and environmental protection.

**1.2.3** The safety-management system should ensure:

- **.1** compliance with mandatory rules and regulations; and
- **.2** that applicable codes, guidelines and standards recommended by the Organization, Administrations, classification societies and maritime industry organizations are taken into account.

## 1.3 Application

The requirements of this Code may be applied to all ships.

### 1.4 Functional requirements for a safety-management system

Every Company should develop, implement and maintain a safety-management system (SMS) which includes the following functional requirements:

.1 a safety and environmental-protection policy;

.2 instructions and procedures to ensure safe operation of ships and protection of the environment in compliance with relevant international and flag State legislation;

.3 defined levels of authority and lines of communication between, and amongst, shore and shipboard personnel;

.4 procedures for reporting accidents and non-conformities with the provisions of this Code;

.5 procedures to prepare for and respond to emergency situations; and

.6 procedures for internal audits and management reviews.

## 2 SAFETY AND ENVIRONMENTAL-PROTECTION POLICY

**2.1** The Company should establish a safety and environmental-protection policy which describes how the objectives given in paragraph 1.2 will be achieved.

**2.2** The Company should ensure that the policy is implemented and maintained at all levels of the organization both, ship-based and shore-based.

## 3 COMPANY RESPONSIBILITIES AND AUTHORITY

**3.1** If the entity who is responsible for the operation of the ship is other than the owner, the owner must report the full name and details of such entity to the Administration.

**3.2** The Company should define and document the responsibility, authority and interrelation of all personnel who manage, perform and verify work relating to and affecting safety and pollution prevention.

**3.3** The Company is responsible for ensuring that adequate resources and shore-based support are provided to enable the designated person or persons to carry out their functions.

## 4 DESIGNATED PERSON(S)

To ensure the safe operation of each ship and to provide a link between the Company and those on board, every Company, as appropriate, should designate a person or persons ashore having direct access to the highest level of management. The responsibility and authority of the designated person or persons should include monitoring the safety and pollution-prevention aspects of the operation of each ship and ensuring that adequate resources and shore-based support are applied, as required.

## 5 MASTER'S RESPONSIBILITY AND AUTHORITY

**5.1** The Company should clearly define and document the master's responsibility with regard to:

.1 implementing the safety and environmental-protection policy of the Company;

.2 motivating the crew in the observation of that policy;

.3 issuing appropriate orders and instructions in a clear and simple manner;

.4 verifying that specified requirements are observed; and

.5 reviewing the SMS and reporting its deficiencies to the shore-based management.

**5.2** The Company should ensure that the SMS operating on board the ship contains a clear statement emphasizing the master's authority. The Company should establish in the SMS that the master has the overriding authority and the responsibility to make decisions with respect to safety and pollution prevention and to request the Company's assistance as may be necessary.

## 6 RESOURCES AND PERSONNEL

**6.1** The Company should ensure that the master is:

.1 properly qualified for command;

.2 fully conversant with the Company's SMS; and

.3 given the necessary support so that the master's duties can be safely performed.

**6.2** The Company should ensure that each ship is manned with qualified, certificated and medically fit seafarers in accordance with national and international requirements.

**6.3** The Company should establish procedures to ensure that new personnel and personnel transferred to new assignments related to safety and protection of the environment are given proper familiarization with their duties. Instructions which are essential to be provided prior to sailing should be identified, documented and given.

**6.4** The Company should ensure that all personnel involved in the Company's SMS have an adequate understanding of relevant rules, regulations, codes and guidelines.

**6.5** The Company should establish and maintain procedures for identifying any training which may be required in support of the SMS and ensure that such training is provided for all personnel concerned.

**6.6** The Company should establish procedures by which the ship's personnel receive relevant information on the SMS in a working language or languages understood by them.

**6.7** The Company should ensure that the ship's personnel are able to communicate effectively in the execution of their duties related to the SMS.

## 7 DEVELOPMENT OF PLANS FOR SHIPBOARD OPERATIONS

The Company should establish procedures for the preparation of plans and instructions for key shipboard operations concerning the safety of the ship and the prevention of pollution. The various tasks involved should be defined and assigned to qualified personnel.

## 8 EMERGENCY PREPAREDNESS

**8.1** The Company should establish procedures to identify, describe and respond to potential emergency shipboard situations.

**8.2** The Company should establish programmes for drills and exercises to prepare for emergency actions.

**8.3** The SMS should provide for measures ensuring that the Company's organization can respond at any time to hazards, accidents and emergency situations involving its ships.

## 9 REPORTS AND ANALYSIS OF NON-CONFORMITIES, ACCIDENTS AND HAZARDOUS OCCURRENCES

**9.1** The SMS should include procedures ensuring that non-conformities, accidents and hazardous situations are reported to the Company, investigated and analysed with the objective of improving safety and pollution prevention.

**9.2** The Company should establish procedures for the implementation of corrective action.

## 10 MAINTENANCE OF THE SHIP AND EQUIPMENT

**10.1** The Company should establish procedures to ensure that the ship is maintained in conformity with the provisions of the relevant rules and regulations and with any additional requirements which may be established by the Company.

**10.2** In meeting these requirements the Company should ensure that:

**.1** inspections are held at appropriate intervals;

**.2** any non-conformity is reported, with its possible cause, if known;

**.3** appropriate corrective action is taken; and

**.4** records of these activities are maintained.

**10.3** The Company should establish procedures in its SMS to identify equipment and technical systems the sudden operational failure of which may result in hazardous situations. The SMS should provide for specific measures aimed at promoting the reliability of such equipment or systems. These measures should include the regular testing of stand-by arrangements and equipment or technical systems that are not in continuous use.

**10.4** The inspections mentioned in 10.2 as well as the measures referred to in 10.3 should be integrated into the ship's operational maintenance routine.

## 11 DOCUMENTATION

**11.1** The Company should establish and maintain procedures to control all documents and data which are relevant to the SMS.

**11.2** The Company should ensure that:

**.1** valid documents are available at all relevant locations;

.2 changes to documents are reviewed and approved by authorized personnel; and

.3 obsolete documents are promptly removed.

**11.3** The documents used to describe and implement the SMS may be referred to as the Safety Management Manual. Documentation should be kept in a form that the Company considers most effective. Each ship should carry on board all documentation relevant to that ship.

## 12 COMPANY VERIFICATION, REVIEW AND EVALUATION

**12.1** The Company should carry out internal safety audits to verify whether safety and pollution-prevention activities comply with the SMS.

**12.2** The Company should periodically evaluate the efficiency of and, when needed, review the SMS in accordance with procedures established by the Company.

**12.3** The audits and possible corrective actions should be carried out in accordance with documented procedures.

**12.4** Personnel carrying out audits should be independent of the areas being audited unless this is impracticable due to the size and the nature of the Company.

**12.5** The results of the audits and reviews should be brought to the attention of all personnel having responsibility in the area involved.

**12.6** The management personnel responsible for the area involved should take timely corrective action on deficiencies found.

## 13 CERTIFICATION, VERIFICATION AND CONTROL

**13.1** The ship should be operated by a Company which is issued a document of compliance relevant to that ship.

**13.2** A document of compliance should be issued for every Company complying with the requirements of the ISM Code by the Administration, by an organization recognized by the Administration or by the Government of the country, acting on behalf of the Administration in which the Company has chosen to conduct its business. This document should be accepted as evidence that the Company is capable of complying with the requirements of the Code.

**13.3** A copy of such a document should be placed on board in order that the master, if so asked, may produce it for the verification of the Administration or organizations recognized by it.

**13.4** A certificate, called a Safety Management Certificate, should be issued to a ship by the Administration or organization recognized by the Administration. The Administration should, when issuing the certificate, verify that the Company and its shipboard management operate in accordance with the approved SMS.

**13.5** The Administration or an organization recognized by the Administration should periodically verify the proper functioning of the ship's SMS as approved.

# Resolution A.741(18)

*Adopted on 4 November 1993*

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO resolution A.680(17), by which it invited Member Governments to encourage those responsible for the management and operation of ships to take appropriate steps to develop, implement and assess safety and pollution-prevention management in accordance with the IMO Guidelines on Management for the Safe Operation of Ships and for Pollution Prevention,

RECALLING ALSO resolution A.596(15), by which it requested the Maritime Safety Committee to develop, as a matter of urgency, guidelines, wherever relevant, concerning shipboard and shore-based management, and its decision to include in the work programme of the Maritime Safety Committee and the Marine Environment Protection Committee an item on shipboard and shore-based management for the safe operation of ships and for the prevention of marine pollution, respectively,

RECALLING FURTHER resolution A.441(XI), by which it invited every State to take the necessary steps to ensure that the owner of a ship which flies the flag of that State provides such State with the current information necessary to enable it to identify and contact the person contracted or otherwise entrusted by the owner to discharge his responsibilities for that ship in regard to matters relating to maritime safety and the protection of the marine environment,

RECALLING FURTHER resolution A.443(XI), by which it invited Governments to take the necessary steps to safeguard the shipmaster in the proper discharge of his responsibilities in regard to maritime safety and the protection of the marine environment,

RECOGNIZING the need for appropriate organization of management to enable it to respond to the need of those on board ships to achieve and maintain high standards of safety and environmental protection,

RECOGNIZING ALSO that the most important means of preventing maritime casualties and pollution of the sea from ships is to design, construct, equip and maintain ships and to operate them with properly trained crews in compliance with international conventions and standards relating to maritime safety and pollution prevention,

NOTING that the Maritime Safety Committee is developing requirements for adoption by Contracting Governments to the International Convention for the Safety of Life at Sea (SOLAS), 1974, which will make compliance with the Code referred to in operative paragraph 1 mandatory,

CONSIDERING that the early implementation of that Code would greatly assist in improving safety at sea and protection of the marine environment,

NOTING FURTHER that the Maritime Safety Committee and the Marine Environment Protection Committee have reviewed resolution A.680(17) and the Guidelines annexed thereto in developing the Code,

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at its sixty-second session and by the Marine Environment Protection Committee at its thirty-fourth session,

1. ADOPTS the International Management Code for the Safe Operation of Ships and for Pollution Prevention (International Safety Management (ISM) Code), set out in the annex* to the present resolution;

2. STRONGLY URGES Governments to implement the ISM Code on a national basis, giving priority to passenger ships, tankers, gas carriers, bulk carriers and mobile offshore units which are flying their flags, as soon as possible but not later than 1 June 1998, pending development of the mandatory applications of the Code;

3. REQUESTS Governments to inform the Maritime Safety Committee and the Marine Environment Protection Committee of the action they have taken in implementing the ISM Code;

4. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to develop guidelines for the implementation of the ISM Code;

5 REQUESTS ALSO the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Code and its associated guidelines under review and to amend them as necessary;

6. REVOKES resolution A.680(17).

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*See page 1.