

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

1.0 BRIDGE ORGANIZATION

1.1 Introduction:

This manual generally describes how shipboard personnel are to organize and undertake their duties on the Bridge of AMHS ships. It also describes the authority and responsibilities of Bridge Officers of the Watch.

Information is provided on good Bridge operating practices, Watchkeeping, and safe navigation. The manual also covers the use of Bridge equipment, facilities and resources.

1.2 Bridge Organization

General

A safe navigational watch must be maintained whenever the ship is at sea or at anchor. Each person on watch is part of a team and is responsible for the safety of the ship. All members of the Bridge team should be aware of the duties of other watch personnel. Decisions, orders and actions must be questioned, by anyone, if there is doubt as to their meaning or validity.

Master

The Master's conduct must be held up as an example to the other members of the Bridge team. A professional working relationship must be fostered between the members of the Bridge team thus encouraging a free flow of information.

The Master is responsible for establishing Bridge organization and the safe operation of the vessel. This includes:

- Designating Officers to carry out their assigned and watch duties.
- Taking an active part in the navigation of the ship.

The Master must ensure that Officers selected for navigational watch duties are properly certified and are competent in English and ratings are properly trained and qualified.

The Master must identify any shortcomings in the Bridge team members and provide opportunities for those requiring on the job training.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)



STCW 95 Convention & STCW 95 Code
ISM Code 1.2, 1.4.2, 5.1.2, 5.1.3, and 7

The Master typically will be on the Bridge on the following occasions:

- Departures and arrivals.
- When the ship is maneuvering.
- When the ship is in heavy traffic or restricted waters.
- During reduced visibility.
- When embarking or disembarking a pilot.

The Master must also be on the Bridge at any time when the Master considers it necessary or when called by the Officer of the Watch.



Chapter 4 of this Manual

The Officer of the Watch will continue to be responsible for safe navigation despite the Master presence on the Bridge. If the Master assumes the responsibilities of the watch, that fact must be understood by all members of the Bridge team, by a clear and unambiguous communication to the bridge personnel.

Officer of the Watch

Officers of the Watch are responsible to the Master for the safe navigation of the ship and must comply with the regulations for preventing collisions at sea.

Officers of the Watch must obey AMHS Standing Orders and any written or verbal orders made or issued by the Master.

Any Officer who fails to understand an order must immediately clarify that order with the Master.



Master's Standing Orders
AMHS Standard Operating Procedures
ISM Code 1.2.1, 1.2.2.1, and 1.2.3

The Officer of the Watch must be familiar with the standards of navigation lights, the heights and limits of arcs of sight of navigation lights, and fog signaling equipment.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

The Officer of the Watch must be familiar with the following:

- Handling characteristics of the ship, particularly:
 - ✓ Turning circle.
 - ✓ Minimum stopping distance.
 - ✓ Effects of heel, trim, water density and squat on under keel clearance.

- Operation of the engine controls and its limitations.

The Officer of the Watch must be aware that other ships will have different handling characteristics.

 	33 CFR 164.11 COLREGS Master's Standing Orders
---------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------

Lookout

At least one person must be looking out while the ship is underway. Extra lookouts should be posted as the situation demands. The lookout may be the Officer of the Watch provided that Officer is not involved in any other collateral duties during that time.

Persons acting as lookouts on a watch must not be given any other tasks or duties during their watch. The lookouts must be aware of the risks to the ship of collision, stranding and grounding.

Lookouts must also watch for other ships or aircraft in distress and wrecks and debris. All sightings must be reported to the Officer of the Watch immediately.

 	46 CFR 78.30-5 COLREGS Master's Standing Orders ISM Code 1.2.1, 1.2.2.1, and 1.4.2
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------

Helmsman

The helmsman must be able to understand and obey helm orders. Crewmembers holding an Able Bodied Seaman's endorsement are qualified to steer when the vessel is in maneuvering status; i.e., on *stand-by* in restricted waters or reduced visibility, and entering or leaving port.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

Switching between steering pumps and between steering stations must only be done under the order and supervision of the Officer of the Watch or the Master.

When the helmsman is given a course change the Officer of the Watch must monitor the change to ensure it is carried out correctly.

When at the wheel no other duties must be given to the helmsman. However, the helmsman must still report anything seen or heard that may put the ship at risk.



STCW Convention & Code
SMS – Ship Emergency Manual
Master's Standing Orders
ISM Code 1.2.1, 1.2.2.1, and 1.4.2

1.3 Watchkeeping

The safety of ship and crew depends on maintaining an alert and efficient watch. Therefore the Officer of the Watch must:

- Keep a look-out posted at night, in poor visibility, congested waters.
- Be alert to the current situation regarding ships and landmarks in the vicinity.
- Be alert to changes in the weather, particularly visibility.
- Note the movement and compass bearing of approaching ships.
- Identify correctly any ship and shore lights.
- Interpret correctly the radar and echo sounder displays.
- Ensure that helm orders are executed correctly, the course is steered accurately.
- Monitor relevant VHF and SSB channels to obtain local situation information.
- Use manufacturers' handbooks to ensure proper corrections are applied to navigational equipment.

Unless in maneuvering status; when altering the speed of the ship, notice of any change of engine movements should be made to the Engineer on Watch.

AMHS – SMS – BRIDGE PRACTICES MANUAL

MAIN TEXT

Last Revised: January 28, 1998 (reformatted)



STCW 95 Convention & STCW 95 Code
ICS – Bridge Procedures Guide
COLREGS
33 CFR 164.11
Master's Standing Orders
ISM Code 1.2.1, 1.2.2.1, and 1.4.2

1.4 Changing the Watch

The Officer of the Watch is not to hand over the watch if there are any doubts about the capabilities of the relieving Officer. In these instances, the Master must be informed immediately.

If a maneuver or hazard avoidance is taking place at the time of watch change, the hand over must be deferred until the action is complete.

The relieving Officer and watch members should ensure their vision has adjusted to the prevailing light conditions before taking over the watch.

The relieving Officer must be satisfied that watch members are capable of performing their duties. The relieving Officer must take note of the following:

- Standing Orders and any special instructions issued by the Master regarding navigation.
- Present position, course, speed and draft.
- Prevailing and predicted tides, currents, weather, visibility and their effects on course and speed.
- Navigational situation, including but not limited to the following:
 - Operational condition of all navigational and safety equipment being used or likely to be used during the watch.
 - Gyro or magnetic compass errors.
 - Presence and movement of ships in sight or known to be in the vicinity.
 - Conditions and hazards likely to be encountered during the watch.
 - Crew members working on deck or in enclosed spaces.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)



Ship Operations Manual
Master's Standing Orders



SMS – Operational Checklist OP 4.5 - - Changing over the Watch - Bridge

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

2.0 BRIDGE EQUIPMENT

2.1 General

Officers of the Watch must be proficient in the operation of Bridge equipment. It is their responsibility to check that the equipment is working correctly, and if it is not, to record any faults in the Bridge Maintenance Logbook, and immediately inform the Master.

New joined Officers or crew members are to be instructed by the Master or Master's designee, as appropriate, in the use of the ship's navigational equipment before becoming part of the Bridge team. The time taken for this instruction will depend on the previous experience of the new Officer or crew member.

 	SOLAS Master's Standing Orders SMS – Procedures Manual SMS – Ship Operations Manual
---------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------

 	SMS – Operational Checklist OP 2.4 - - Bridge Equipment - Familiarization
---------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------

2.2 ARPA Radar

The ARPA radar fitted to the ship is an aid to and not a replacement for good navigational practice. Officers of the Watch are to be proficient in the operation of their particular radar equipment and aware of its limitations.

 	Manufacturer's Operating Instructions
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------

At least one radar and the ARPA must be operating while the ship is underway. It must be checked before use, adjusted if required and must be checked (tuned) regularly during each watch.

The Officer of the Watch must actively use radar for navigational purposes during the following conditions:

- Reduced visibility.
- At night.
- Heavy traffic.
- Whenever it is considered necessary for safe navigation.

 	STCW 95 Convention & STCW 95 Code
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

2.3 Compasses

The gyrocompass should be run continuously. If it stops for any reason, it should be restarted, given time to settle and checked before using. Latitude and speed Changes (corrections) are to be made ‘only’ at the direction of the Master.

Compasses should be compared regularly at sea for errors and any errors discovered are recorded in the Bridge Log Book, and Compass Record Book.



Manufacturer’s Operating Instructions

2.4 Depth Sounders

The depth sounding equipment should be switched on and used when in coastal waters as a further aid to navigation, or in accordance with the Master’s Standing Orders.



Manufacturer’s Operating Instructions
Master’s Standing Orders

2.5 Chronometers

The chronometer or clock on the Bridge is the master clock for the ship. It must be checked daily for errors against a radio time signal and wound at least once weekly.

Electronically operated chronometers should have their batteries changed according to the manufacturer's instructions. All other clocks are to be synchronized to the master clock.



Manufacturer’s Operating Instructions
Master’s Standing Orders

2.6 Electronic Navigation Aids

Electronic navigation aids include, and may not be limited to the following:

- LORAN C.
- GPS [Global Positioning System.]
- GMDSS [Global Marine Distress Signaling System]
- AIS (Automatic Identification System)
- Doppler Log
- NAVTEX
- Weather Fax.

Added: 24Oct03

Added: 24Oct03

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

Officers of the Watch must be able to operate correctly all the installed electronic navigation aids.

 	Manufacturer's Operating Instructions STCW 95 Convention & STCW 95 Code 33 CFR 164.11 Master's Standing Orders
---------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------

2.7 Signaling Equipment

Navigation lights and the sound signaling apparatus should be checked daily and operated according to regulations.

 	COLREGS Manufacturer's Operating Instructions AMHS's Planned Maintenance Listing Manual
---------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------

2.8 GMDSS

As required by the regulations, GMDSS equipment will be fitted to each ship. When GMDSS is fitted to any ship, suitably qualified Deck Officers are to operate the equipment and ensure it is serviceable.

 	STCW 95 Convention & STCW 95 Code 46 CFR 80.1073 Manufacturer's Operating Instructions
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------

A Radio Log Book must be maintained by the Officers of the Watch.

 	46 CFR 80.409
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------

2.9 Maneuvering Data

The Master must ensure that a maneuvering poster is permanently, prominently and usefully displayed on the Bridge. The poster should contain general particulars and detailed information describing the maneuvering characteristics of the ship.

The Officers using the poster must be aware that the maneuvering performance of the ship may be affected by environmental, hull and loading conditions.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)



46 CFR 78.21
33 CFR 164.35



Maneuvering Poster/Guidance

2.10 Charts and Publications

The largest scale charts, suitable for the areas of the projected voyage, must be on board and corrected with the latest available information. AMHS Chart & Publication correction procedures shall be used to ensure a fleet-wide standardized system is used.



Master's Action Circular 00-003

As Notices to Mariners, etc., can be delayed in the postal system, it is important that radio navigational warnings for areas being transited are obtained.

Notices to Mariners and Other Official Publications

To ensure the receipt of all relevant navigational warnings before sailing, the Master, or designated Mate, must:

- Consult weekly and local editions of USCG Notices to Mariners, 13th and 17th districts, and Canadian Coast Guard (CCG) Notices to Shipping, as applicable.
- Make full use of radio navigational warnings after sailing to obtain the most up-to-date information available.

It is the duty of all Watch Officers to monitor USCG and CCG broadcasts for applicable warnings and information. Navigational Warnings received applicable to the route being traveled by vessels are to be posted where they can be accessed and adhered to by all Watch Officers.

The Master must ensure that charts, nautical publications and radio publications are being amended and are up-to-date.

The Second Officer is responsible for correcting and maintaining all charts and publications. Records of applicable corrections to charts and publications will be kept on board.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)



33 CFR 164.33

46 CFR 78.05

Chart Cards

US Notice to Mariners

Canadian Coast Guard Notice to Shipping

Local Notices to Mariners

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

THIS
PAGE
INTENTIONALLY
LEFT
BLANK

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

3.0 PASSAGE PLANNING

3.1 Appraisal

Every voyage must be appraised by the Master using the latest relevant information from various sources. The result of the appraisal may affect the route the ship will take to reach its destination.

The information considered should include the following:

- Tide and current predictions
- NAVTEX and local radio weather warnings and forecasts
- NAVTEX and local radio navigational warnings
- Notices to mariners and notices to shipping
- Anticipated vessel traffic
- Load line or draft limit
- Personal experience
- Political situation



33 CFR 164.11

3.2 Planning

Every voyage route will be preplanned from berth to berth. When planning routes through ocean entrances, allow space to maneuver in stormy weather. All necessary charts should be collected and updated with the latest information.

Routes should be planned to take account of:

- ☑ Obstructions or hazards
- ☑ Under keel clearance
- ☑ Restricted areas
- ☑ Tides and currents
- ☑ Normal vessel traffic patterns and density
- ☑ Required and recommended vessel traffic lanes

Planned routes will be drawn on the charts including compass headings and distance off significant landmarks.



33 CFR 164.11
COLREGS
Master's Standing Orders

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

THIS
PAGE
INTENTIONALLY
LEFT
BLANK

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

4.0 NAVIGATION

4.1 Position Monitoring

Whenever possible, use more than one method to fix the ship's position. This will confirm that the equipment being used is operating correctly. Always make a positive identification of relevant navigation marks. Radar fixes should be confirmed with a visual fix where possible.

Officers should practice radar plotting during clear weather when visual sightings can confirm the accuracy of the plots.

4.2 Navigating in Coastal/Inland Waters and Traffic Separation Schemes

General

The majority of AMHS voyages are in coastal or inland waters. This requires more concentration and attention to detail than ocean waters.

When navigating in coastal and inland waters and traffic separation schemes:

- Ensure proper and appropriate lookout is maintained.
- Monitor local and coastal warning broadcasts.
- Frequently check compasses and other navigation aids.
- Use the largest scale chart(s) available.
- Ensure under the keel clearances to account for squatting in shallow waters.

Coastal/Inland Waters

When navigating in coastal/inland waters use the largest scale charts available. The under keel clearance can be reduced significantly by squat in shallow waters.

Routes through coastal waters should allow sufficient clearance past headlands or obstructions because of the effect tides and currents have on the ship's capability for maneuvering.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

Traffic Separation Schemes

Keep to the correct lane for the direction of travel when using traffic separation schemes. Enter or leave traffic lanes at the terminus if possible. Use the smallest angle of approach as possible to the flow of traffic when entering or leaving from the side.

If it is necessary to cross a traffic lane do so at right angles to the traffic where practicable.

  COLREGS

4.3 Navigating in Heavy Weather, Ice and Low Visibility

Heavy Weather

If storm conditions are met on the planned route, reduce speed or change heading.

When heavy weather is likely to occur, reduce the speed of the ship or alter course to avoid the weather. The Master may make changes in ballast which can also improve the passage of the ship through the water.

The Officer of the Watch must be kept informed of crew members working on deck and in hazardous spaces.

  SMS – Ship Operations Manual

  SMS- Operational Checklist OP 4.3 - - Navigating in Heavy Weather

Ice

When the ship is heading into cold weather or heavy ice, inform the Master and the Engineer on Watch. Inform the crew and take the precautions in the checklist.

If navigating through heavy ice, prevent damage to the bow plating by using only sufficient power to maintain headway and steerage.

Prior to backing down in ice, check for clearance astern.

Added: 24Oct03

  SMS – Ship Operations Manual

  SMS – Operational Checklist OP 4.4 - - Navigating in Cold Weather & Ice

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

Low Visibility

When conditions of low/restricted visibility set in or appear about to set in, notify the Master and take the following action:

- Place engines on standby and proceed at a safe speed.
- Ensure the ARPA is operating.
- Station lookouts as the circumstances require.
- Sound whistle signals as directed by the Rules of the Road [COLREGS].
- Log the watch condition set and the precautions taken.
- Comply with the Rules of the Road applicable to conduct under reduced visibility.
- Station an able bodied seaman at the wheel.

The Master must determine the appropriate watch condition to set and assign personnel to perform the necessary duties. Any change of the Officer of the Watch must be clearly stated and logged.

 	SOLAS COLREGS 33 CFR 164.11
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------

 	SMS – Operational Checklist OP 4.2 - - Bridge Procedures – Restricted Visibility
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------

4.4 Calling the Master

The Master must be called to the Bridge immediately if:

- The ship appears to be standing into danger.
- Visibility is reduced below the Master's advised minimum distance.
- Receipt of a distress signal.
- Navigational problems.
- Essential equipment fails.
- Any situation in which the Officer of the Watch is in doubt for any reason at any time.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

Despite the requirements to call the Master, the Officer of the Watch should not hesitate to take immediate action for the safety of the ship.



SOLAS
ICS – Bridge Procedures Guide
Master's Standing Orders

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

5.0 PILOTAGE

5.1 Taking on a Pilot

The Pilot may be brought to the ship by pilot boat or by helicopter. The Master must ensure the necessary preparations are made. If the Pilot is boarding by pilot ladder, the Master must ensure strict compliance with the current regulations regarding pilot ladders.

A Deck Officer must supervise the boarding, maintaining visual contact with the Pilot and VHF contact with the Bridge.

If the Pilot is boarding by helicopter the Chief Mate must ensure the designated landing area is clear. A suitably qualified crewmember equipped with a fireman's outfit and a portable dry powder extinguisher must be in position by the landing area.

 	SOLAS COLREGS ICS – Guide to Ship/Helicopter Operations 46 CFR 78.90 46 CFR 77.40
---------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------

 	SMS – Operational Checklist OP 1.3 - - Pilotage & Pilot Card SMS – Operational Checklist OP 4.6 - - Helicopter Landing Operations
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------

5.2 Pilot Onboard

When onboard, the Pilot will only assume navigational control of the ship under the supervision of the Master who remains in command.

The presence of a Pilot onboard does not relieve the Officer of the Watch of their responsibilities and the orders given to the helm and the engine room are to be monitored closely.

The Pilot is to be given the handling characteristics of the ship.

 	COLREGS 33 CFR 164.11(k)
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------

 	SMS – Operational Checklist OP 1.3 - - Pilotage & Pilot Card
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

Helmsman:

The helmsman must be made aware when the Pilot starts giving the maneuvering advice.

Safe Navigation:

The Pilot's intended maneuvers for the voyage or transiting any restricted waterway, docking, undocking or transiting hazardous channels or passages should be discussed with and approved by the Master prior to arriving at the location. Any subsequent changes must be reported immediately to the Master.

While the Pilot is controlling the ship, the Master must ensure a businesslike relationship is maintained between the Pilot, the Master and the Officer of the Watch.

The Pilot's attention must not be diverted from the safe navigation of the vessel.

If the Master judges the Pilot to be incapable of performing their task, for whatever reason, the Pilot is to be dismissed. The Master must then take whatever action is necessary to navigate the ship safely until the services of another Pilot are obtained. The circumstances must be logged by the Master in the Bridge Deck Logbook.

The mooring arrangements and procedures are to be reviewed and agreed upon by the Master and the Pilot. Any subsequent changes must be reported immediately to the Master.

 	SMS – Ship Operations Manual
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------

 	OP 1.3 - - Pilotage & Pilot Card
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------

5.3 Disembarking the Pilot

The Master must not allow the Pilot to disembark if to do so would jeopardize the safety of the ship. If the Master decides the prevailing conditions would endanger the ship or the Pilot, the Master should inform the Pilot that disembarkation is not possible and that the Pilot must remain on board until the next port of call.

If the Pilot is leaving by helicopter, the Chief Mate must make the necessary arrangements on the deck for the helicopter to winch the Pilot off the ship.

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)



ICS – Guide to Ship/Helicopter Operations
46 CFR 78.90-1



SMS – Operational Checklist OP 4.6 - - Helicopter Landing Operations

AMHS – SMS – BRIDGE PRACTICES MANUAL
MAIN TEXT

Last Revised: January 28, 1998 (reformatted)

THIS
PAGE
INTENTIONALLY
LEFT
BLANK