

## B1 FAMILIARISATION WITH BRIDGE EQUIPMENT

Has the operation of the following equipment been studied and fully understood?

- bridge and deck lighting
- emergency arrangements in the event of main power failure
- navigation and signal lights, including
  - searchlights
  - signalling lamp
  - morse light
- sound signalling apparatus, including
  - whistles
  - fog bell and gong system
- safety equipment, including
  - LSA equipment including pyrotechnics, EPIRB and SART
  - bridge fire detection panel
  - general and fire alarm signalling arrangements
  - emergency pump, ventilation and watertight door controls
- internal ship communications facilities, including
  - portable radios
  - emergency "batteryless" telephone system
  - public address system
- AIS and external communication equipment, including
  - VHF and GMDSS equipment
- alarm systems on bridge
- automatic track-keeping system, if fitted
- ECDIS and electronic charts, if fitted
- echo sounder
- electronic navigational position-fixing systems
- VDR or S-VDR equipment
- gyro compass/repeaters
- IBS functions, if fitted
- magnetic compass
- off-course alarm
- radar including ARPA
- speed/distance recorder
- engine and thruster controls

## B2 PREPARATION FOR SEA

**Has a passage plan for the intended voyage been prepared?** (see section 2)

**Has the following equipment been checked and found ready for use?**

- anchors
- bridge movement book/course and engine movement recorder
- echo sounder
- electronic navigational position-fixing systems
- gyro/magnetic compass and repeaters
- passage plan entered into integrated bridge system
- radar(s)
- required AIS data inputs made, speed/distance recorder
- clocks

**Has the following equipment been tested, synchronised and found ready for use?**

- bridge and engine room telegraphs, including**
- rpm indicators
  - emergency engine stops
  - thruster controls and indicators, if fitted
  - controllable pitch propeller controls and indicators, if fitted

- communications facilities, including**
- bridge to engine room/mooring station communications
  - portable radios
  - VHF radio communications with port authority

- navigation and signal lights, including**
- searchlights
  - signalling lamp
  - morse light

- sound signalling apparatus, including**
- whistles
  - fog bell and gong system

**steering gear, including manual, auto-pilot and emergency changeover arrangements and rudder indicators** (see annex A7)

**window wiper/clearview screen arrangements**

**Is the ship secure for sea?**

- cargo and cargo handling equipment secure
- all hull openings secure and watertight
- cargo/passenger details available
- stability and draught information available

## B3 PREPARATION FOR ARRIVAL IN PORT

- In preparing the passage for arrival in port, has a pre-pilotage information exchange taken place?** (see annexes A1 and A2)
  - Has the passage plan been updated following receipt of the Shore-to-Ship Pilot/Master Exchange form and all latest navigational warnings?**
  - Has the ETA been sent with all relevant information required by local regulations** (e.g. details of dangerous/hazardous goods carried)?
  - Is it necessary to rearrange cargo/ballast?**
- Has the following equipment been prepared and checked?**
- course and engine movement recorders
  - clock synchronisation
  - communications with the engine control room and mooring stations
  - signalling equipment, including flags/lights
  - deck lighting
  - mooring winches and lines, including heaving lines
  - pressure on fire main
  - anchors cleared away
  - stabilisers and log tubes housed, if fitted
- Has the steering gear been tested, and has manual steering been engaged in sufficient time for the helmsman to become accustomed before manoeuvring commences?** (see annex A7)
  - Have the engines been tested and prepared for manoeuvring?**
  - Has the Pilot Card** (see annex A3) **been completed and are the pilot embarkation arrangements** (see annex A5) **in hand?**
  - Have VHF channels for the various services** (e.g. VTS, pilot, tugs, berthing instructions) **been noted and a radio check carried out?**
  - Has the port been made fully aware of any special berthing requirements that the ship may have?**

**Other checks:**

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## B4 PILOTAGE

Immediately on arrival on the bridge, has the pilot been informed of the ship's heading, speed, engine setting and draught?

Has the pilot been informed of the location of lifesaving appliances provided on board for his use?

**Have details of the proposed passage plan been discussed with the pilot and agreed with the master, including:**

radio communications and reporting requirements

bridge watch and crew stand-by arrangements

deployment and use of tugs

berthing/anchoring arrangements

expected traffic during transit

pilot change-over arrangements, if any

fender requirements

**Has a completed Pilot Card (see annex A3) been handed to the pilot and has the pilot been referred to the Wheelhouse Poster? (see annex A4)**

**Have the responsibilities within the bridge team for the pilotage been defined and are they clearly understood?**

**Has the language to be used on the bridge between the ship, the pilot and the shore been agreed?**

**Are the progress of the ship and the execution of orders being monitored by the master and officer of the watch?**

**Are the engine room and ship's crew being regularly briefed on the progress of the ship during the pilotage?**

**Are the correct lights, flags and shapes being displayed?**

**Other checks:**

## B5 PASSAGE PLAN APPRAISAL

### Have navigation charts been selected from chart catalogue, including:

- large scale charts for coastal waters
- appropriate scale charts for ocean passages
- planning charts
- routeing, climatic, pilot and load line zone charts

### Have publications been selected, including:

- Sailing Directions and pilot books
- light lists
- radio signals
- guides to port entry
- tide tables and tidal stream atlas

### Have all navigation charts and publications been corrected up to date, including:

- the ordering of new charts/publications, if necessary
- notices to mariners
- local area warnings
- NAVAREA navigational warnings

### Have the following been considered?

- ship's departure and arrival draughts together with any restrictions on underkeel clearance due to squat
- ship's cargo and any special cargo stowage/carriage restrictions
- if there are any special ship operational requirements for the passage

### Have the following been checked?

- planning charts and publications for advice and recommendations on route to be taken
- climatological information for weather characteristics of the area
- navigation charts and publications for landfall features
- navigation charts and publications for Ships' Routeing Schemes, Ship Reporting Systems and Vessel Traffic Services (VTS)

### Has weather routeing been considered for passage?

### Have the following preparations been made for port arrival?

- navigation charts and publications studied for pilotage requirements
- Ship-to-Shore Master/Pilot Exchange form prepared (see annex A1)
- Pilot Card updated (see annex A3)
- port guides studied for port information including arrival/berthing restrictions

### Other checks:

## B6 NAVIGATION IN COASTAL WATERS

### Have the following factors been taken into consideration in preparing the passage plan?

- advice/recommendations in Sailing Directions
- ship's draught in relation to available water depths
- effect of squat on underkeel clearance in shallow water
- tides and currents
- weather, particularly in areas prone to 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
- ship security considerations regarding piracy or armed attack

**Are local/coastal warning broadcasts being monitored?**

**Is participation in area reporting systems recommended including VTS?**

**Is the ship's position being fixed at regular intervals?**

### Has equipment been regularly checked/tested, including:

- gyro/magnetic compass errors
- manual steering before entering coastal waters if automatic steering has been engaged for a prolonged period
- radar performance and radar heading line marker alignment
- echo sounder

**Is the OOW prepared to use the engines and call a look-out or a helmsman to the bridge?**

**Have all measures been taken to protect the environment from pollution by the ship and to comply with applicable pollution regulations?**

### Other checks:

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## B7 NAVIGATION IN OCEAN WATERS

- Is keeping a look-out being given due priority?
- Are NAVAREA, HYDROLANT and HYDROPAC navigational warning broadcasts and other long-range weather reports being monitored closely?
- Are changes in the local weather being monitored and is the barometer observed regularly?
- Is participation in area reporting systems (e.g. AMVER) recommended?
- Is the ship's position being fixed at regular intervals?
- Are celestial navigational techniques being practised?
- Are gyro/magnetic compass errors and radar performance being checked regularly?
- Have radar techniques been practised (in clear visibility)?
- Have preparations been made for landfall?
- Have measures been taken to protect the environment from pollution by the ship and to comply with applicable pollution regulations?

**Other checks:**

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## B8 ANCHORING AND ANCHOR WATCH

### Has an anchoring plan been prepared taking into account:

- speed reduction in ample time
- direction/strength of wind and current
- tidal stream when manoeuvring at low speeds
- need for adequate searoom particularly to seaward
- depth of water, type of seabed and the scope of anchor cable required

**Have the engine room and anchor party been informed of the time of "stand-by" for anchoring?**

**Are the anchors, lights/shapes and sound signalling apparatus ready for use?**

**Has the anchor position of the ship been reported to the port authority?**

### While at anchor, the OOW should:

- determine and plot the ship's position on the appropriate chart as soon as practicable
- when circumstances permit, check at sufficiently frequent intervals whether the ship is remaining securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects
- ensure that proper look-out is maintained
- ensure that inspection rounds of the ship are made periodically
- ensure vessel access control precautions are maintained in respect of vessel security
- observe meteorological and tidal conditions and the state of the sea
- notify the master and undertake all necessary measures if the ship drags anchor
- ensure that the state of readiness of the main engines and other machinery is in accordance with the master's instructions
- if visibility deteriorates, notify the master
- ensure that the ship exhibits the appropriate lights and shapes and that appropriate sound signals are made in accordance with all applicable regulations
- take measures to protect the environment from pollution by the ship and comply with applicable pollution regulations

### Other checks:

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## B9 NAVIGATION IN RESTRICTED VISIBILITY

**Has the following equipment been checked to ensure that it is fully operational?**

- radar, ARPA or other plotting facilities
- VHF
- fog signalling apparatus
- navigation lights
- echo sounder, if in shallow waters
- watertight doors, if fitted
- Have look-out(s) been posted and is a helmsman on stand-by?**
- Has planning allowed for the provision of additional bridge team personnel if required?**
- Have the master and engine room been informed, and the engines put on stand-by?**
- Are the COLREGS being complied with, particularly with regard to rule 19 and proceeding at a safe speed?**
- Is the ship ready to reduce speed, stop or turn away from danger?**
- If the ship's position is in doubt, has the possibility of anchoring been considered?**

**Other checks:**

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## B10 NAVIGATION IN HEAVY WEATHER OR IN TROPICAL STORM AREAS

- Have the master, engine room and crew been informed of the conditions?
- Have all movable objects been secured above and below decks, particularly in the engine room, galley and in storerooms?
- Has the ship's accommodation been secured and all ports and deadlights closed?
- Have all weather deck openings been secured?
- Have speed and course been adjusted as necessary?
- Has the crew been warned to avoid upper deck areas made dangerous by the weather?
- Have safety lines/hand ropes been rigged where necessary?

### 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

### Other checks:

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## B11 NAVIGATION IN ICE

- Have the master, engine room and crew been informed of the ice conditions?
- Have watertight doors been shut, as appropriate?
- Has speed been moderated?
- Has the frequency of sounding tanks and bilges been increased?

**Have instructions been issued on the following matters:**

- monitoring ice advisory service broadcasts
- transmitting danger messages in accordance with SOLAS

**Other checks:**

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## B12 CHANGING OVER THE WATCH

**When changing over the watch, relieving officers should personally satisfy themselves regarding the following:**

- standing orders and other special instructions of the master relating to navigation of the ship
- position, course, speed and draught of the ship
- prevailing and predicted tides, currents, weather and visibility and the effect of these factors upon course and speed
- procedures for the use of main engines to manoeuvre when the main engines are on bridge control, and the status of the watchkeeping arrangements in the engine room
- the ship security status
- sufficient time has been allowed for night vision to be established and that such vision is maintained
- navigational situation, including but not limited to:
  - the operational condition of all navigational and safety equipment being used or likely to be used during the watch
  - the errors of gyro and magnetic compasses
  - the presence and movements of ships in sight or known to be in the vicinity
  - the conditions and hazards likely to be encountered during the watch
  - the possible effects of heel, trim, water density and squat on underkeel clearance
  - any special deck work in progress

**Other points:**

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## B13 CALLING THE MASTER

### The OOW should notify the master immediately:

- if restricted visibility is encountered or expected
- if traffic conditions or the movements of other ships are causing concern
- if difficulties are experienced in maintaining course
- on failure to sight land, a navigation mark or obtain soundings by the expected time
- if, unexpectedly, land or a navigation mark is sighted or a change in soundings occurs
- of breakdown of the engines, propulsion machinery remote control, steering gear or any essential navigational equipment, alarm or indicator
- if the radio equipment malfunctions
- in heavy weather, if in any doubt about the possibility of weather damage
- if the ship meets any hazard to navigation, such as ice or a derelict
- if any vessel security concerns arise
- in any other emergency or if in any doubt

### Other points:

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# B14 PRE-OPERATIONAL DP CHECKLIST

Ship's Name: ..... Date: ..... Time: .....

Item		Status		Remarks	
Computers	A	Running	Online		
	B	Running	Online		
	A/B Difference Messages				
Thrusters	1	Running	Enabled		
	2	Running	Enabled		
	3	Running	Enabled		
	4	Running	Enabled		
	5	Running	Enabled		
	6	Running	Enabled		
Power and Generators	1	Running	Stand-By		
	2	Running	Stand-By		
	3	Running	Stand-By		
	4	Running	Stand-By		
Bus Tie Switch	Open/Closed				
Equipment Class	Consequence Analysis Enabled				
Control Gain	Low/Med/High		Customised/Relaxed		
Alt Rot Point	No Selected		Position:		
Wind Sensors	1/2	Available	Selected	Gyro Differences Checked	
Gyros	1	Running	Selected	Repeater Checked	
	2	Running	Selected	Gyro Alarms Checked	
	3	Running	Selected		
MRU	1		MRU Differences Checked		
	2				
Printer	Running		Paper OK	Outstanding Messages Checked	
Position Reference Systems	DGPS	1	Running HDOP	Diff Available	IMCA DQI Factor
			AOD (Sec)		
		2	Running HDOP	Diff Available	IMCA DQI Factor
			AOD (Sec)		
	Taut Wires	Port		Deployed	Water Depth: m
		Starboard		Deployed	Water Depth: m
	Fan Beam	Deployed		Range/Brg:	Reflector Location
	HPR	1	Running	Pole Up/Down	Transponders Deployed
		2	Running	Pole Up/Down	Transponders Deployed
	Communications	VHF		Channels:	Working:
		Listening:			
UHF		Channels:		Tested	
Internal				Tested	
Talkback				Tested	
Weather Forecast	Time Received:				
Signals Displayed					
30 Mins Setting Time Complete					
MCR Checklist Complete					
Tasks Agreed					
Permit To Work	Ref No:		Expiry Time:		

Signed: ..... Rank: .....

