2nd MATES NOTES (OOW) FOR MCA ORAL EXAMINATIONS

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LSA & FFA

LAUNCHING OF LIFEBOAT IN EMERGENCY

As soon as I take orders from Master:

Sound signal, I will wear my PPE with Life Jacket

Proceed to designated station

Establish communication

Collect my crew with PPE and Life Jacket (check whistle, lights etc) Head count

Brief them their duties once again

Railing removed, see for obstruction remove, proper illumination, boat falls checked

See over board side clear

Don't mention harbour pins

Since they are removed as a P.O.B or sailing

Gripes to be removed from the deck

Will check overboard side and lower embarkation ladder

First will send two persons in one will start eng another put plugs in life line to be released in boat itself for free most while lowering

Fwd painter to be passed and made fast to strong point, When at embarkation level

Release tracing pendent and make fast bows in tackle. All sit in boat except winch man

Lower the boat slowly, checking the over side

Release fall hooks together and make water borne

Once water borne the final person to be in boat

Make 45 deg angle less then by boat hook and 90 deg towards wind water side

Before going additionally I will try to bring in Chart, EPIRB, SART, Binoculars, extra ration, fresh water, warm clothing's, blankets, walki talkies and area charts.

Note: stay away from sinking/ emergency ground, but stay near the area

Since salvage would search u there.

While lowering fall hooks both to be released together.

DAVIT LAUNCHED INFLATABLE LIFERAFT

1. See for adequate illumination.
2. Remove guardrails. Obstruction.
3. Raise raft from deck by davit, hold bowsing lines at each end of raft, hold painter line and short red fireline.
4. Slew the davit arm to overside, make fast bowsing lines and painter.
5. Check overside obstn, inflate by pulling sharply the red firing line.
6. Once inflated make sure raft is well secured to deck by bowing lines.
7. Ensure all personnel's are correctly wearing their life jackets.
8. Board the raft make sure it doesn't tilt since supported by one wire.
9. Once boarding is complete, release bowsing lines and painter and check all clean around and below the raft then lower away.
10. Once in water, release raft and allow to drift clear of immediate danger, before streaming sea anchor.

Instructions for the launching in close proximity to the launching station. Emergency lighting, means of access, drills of above every 4 months by special liferaft.

MANUAL LAUNCHING OF AN INFLATABLE LIFERAFT

1. Look overside clear for launching the raft.
2. Ensure painter is secured to a strong point.
3. Remove any side railings, obstructions, chains etc.
4. Remove any securing arrangements form the raft itself.
5. If safe to launch then throw the raft to overable checking obstruction.
6. Pull painter to full length to inflate the raft.
7. Once raft is inflated (should normally take 1 to 3 min) dependent on climatic conditions then board as soon as possible by means of rope or ladder provided.

Never jump directly into a raft from any height.

Boarding launching instruction to be placed on container itself or near launching station

ALARMS

1. General emg alarm.
2. Other emg alarm.
3. Means: by which abandon ship order is to be given.

MUSTER LIST CONTENTS

1. Name and rank of crew member.
2. Duties assigned: (state separately for different emergencies)
3. Muster points (for respective emergencies)
4. Alternative muster points.
5. Boat station (no.1 / no.2)
6. Person responsible (for maintenance of equipments)
7. Name/Rank of responsible person or in charge of respective parties.

Emergency boat muster signal:

7 or more short blast followed by continuous long ringing/sounding of ships bells/whistles. The vessel will be abandoned with the express verbal orders of the master only.

SOLAS TRAINING MANUAL

Shall be provided in each crew mess room and recreation room and bridge.

CONTENTS

Following shall be explained in details.

1. Donning of lifejacket, immersion suit and anti exposure suit.
2. Muster at the assigned station.
3. Boarding, launching and clearing the survival craft.
4. Method of launching from within the survival craft.
5. Release from launching appliances.
6. Method and use of devise for protection in launching areas.
7. Illumination in launching areas.

8. Use of all survival equipment.
9. Use of all detection equipment.
10. Use of radio LSA.
11. Use of engine and accessories.
12. Recovery of survival craft and rescue boat. (including storage and securing).
13. Hazards of exposure and need for warm clothing.
14. Best use of the craft facilities to survive.
15. Methods helicopter rescue and ships LTA.
16. Contents of muster list and emergency instructions.
17. Instructions for emergency repair of LSA.

LIFE BOAT

1. Speed: 6 kts all lifeboats.

2 . kts if towing

2. Fuel : sufficient for 24 hrs at 6 kts.
3. Positive pressure: for min 10 mins if fitted with self contained compression.
4. Freefall lifeboats: Drop tested, 1-3 times the height they are certified to drop from the vessel.
5. Engines: run weekly for 3 min (head and astern).
6. Inspection: visually weekly basis and equipments: (once in a month).
7. External lifeboat lights: visible range 2 miles, illumination min 12 hrs, if flashing light type: 50 flashes per minute and should be maintained for 12 hrs.
8. Wire falls: every 2.5 years and renewed every 5 years unless stainless steel.
9. Launching criteria : in 20 deg list and 10 deg trim.
10. Load test : load tested every 5 years.
11. Release gear: to be overhauled every 5 years.
12. Launching instructions reg launch of lifeboat must be displayed in the close proximity and be clearly legible.
13. Life boat capacity: not to be > 150 persons.
14. If lifeboat cannot be launched from on board then same means must be provided (ladder) for a person to board who is lowering the life boat.

LIFE BOATS CARRIAGE REQUIREMENTS

500 T or 85 m or greater :

100% L/B on each side – totally enclosed

100% L/B on each side (if this is not possible then 200%)

Or 100% L/B (free fall type launched over the stem) and 100% L/R on each side with a davit on side.

And If vsl is more than 100m the one six man life raft fwd of aft depend on posn of block.

Rescue boat

One inflatable life jacket.

One survival suit for each rescue boat crew member.

50 m if buoyant line suitable for towing another craft.

Lifeboat equipments

1. Sufficient buoyant oars to make broadway in calm seas.
2. Crutches or equivalent provided for each oar.
3. 2 boat hooks.
4. A buoyant bailer.
5. 2 buckets.
6. A survival manual.
7. A compass.
8. A sea anchor.
9. 2 painter (one permanent and 1 quick release)
10. 2 Hatchets (one forward and one aft)
11. 3 ltrs of water per person (valid for 3 yrs)
12. 10000 kj of rations per person (valid for 5 yrs).
13. 3 rustproof, graduated, drinking vsls.
14. 6 hand held flares.
15. 4 parachute flares.

16. 2 smoke floats.
17. 1 torch capable of signaling morse, with spare bulb and batteries.
18. 1 signaling mirror.
19. 1 signal card (solas no.2)
20. 1 whistle.
21. 1 first aid kit (valid for 5 yrs)
22. 6 sea sickness tablets for person.
23. 1 sea sickness bag per person.
24. 1 jack knife.
25. 3 tin openers.
26. 2 buoyant rescue quoits with 30m of buoyant line attached.
27. 1 manual bilge pump.
28. 1 set of fishing tackle.
29. Sufficient tools for minor engine repairs.
30. 2 fire extinguishers, suitable for oil fires.
31. 1 search light.
32. 1 radar reflector.
33. TPA for 10% of capacity of the boat or 2 whichever is greater.

MARKING ON LIFE BOATS

1. Dimensions
2. Capacity
3. Makers serial no.
4. Name or trade mark of manufactures. (tag) inside.
5. Date of manufacture.
6. Name and POR of vessel marked on each bow of craft.
7. Callsign on the thwarts, (for seeing from top).

NOTES: about life boats:

- Cargo vessel after 1986 – fully enclosed lifeboat.
- Passenger ships 1986 – totally or partly enclosed lifeboat.
- Oil tankers carrying cargo flashpoint <60 deg.
- Fire protected totally enclosed is fitted with self-contained deluge or sprinkler system.
- 8 min resistance in oil fire.
- Chemical / gas / toxic tankers.
- Life boat with air support system.
- 10 min positive pressure inside.
- Launching – cargo ships 10 min, passenger ships 30 min.

LIFE RAFTS

Weight : weight of throw over the launch raft not >185 kgs. Inflate : within 1 min fully inflate. Gas non toxic.

Lifer raft external light as per lifeboat.

Painter : twice the height (length) of its stowed position to water time at light ship condition or 15 mts whichever is greater.

MRU : Service annually, Rafts : service annually.

HRU : throw away type – validity two years,

Hook : automatic release hook of raft if fitted must be serviced: 2 – 5 years. Proof tested 100 % swl every 5 years.

Launching station: a ladder must be provided at each life station.

If davit launch raft: must be capable of being launched with on adverse list of 20 deg / trim of 10 deg.

MARKINGS ON LIFE RAFT (CONTAINER)

1. manufacturers name or trade mark.
2. serial no.
3. capacity of the raft
4. dot approved.
5. solas 86.
6. type of emergency pack enclosed.
7. date of last service.
8. length of painter line
9. maximum height of stowage.
10. launching instructions.

LIFE RAFT EQUIPMENT

1. 2 buoyant paddles.
2. a buoyant boiler, if 13 persons or more then 2 boilers.
3. insts on immediate actions on boarding the raft.
4. a survival manual.
5. 2 sea anchors (one rigged and ready for use)
6. 1.5 ltrs of water per person (Valid for 3 yrs)
7. 10000 kj of rations per person (valid for 5 yrs)
8. 1 rust proof, gradated drinking vsl.
9. 6 hand held flares.
10. 4 parachute flares.
11. 1 torch capable of signaling morse with spare bulb and batteries.
12. 2 smoke floats.
13. 1 signaling mirror.
14. 1 signal card (SOLAS no.2)
15. 1 whistle.

16. 1 first aid kit (valid for 5 yrs)
17. 6 sea sickness tablets per persons.
18. 1 sea sickness bag per person.
19. 1 safety knife.
20. 3 tin openers.
21. 1 buoyant rescue quoits with 30 m of buoyant line attached.
22. 1 bellows p/p.
23. 1 set of fishing tackle.
24. 2 sponges.
25. 1 temporary repair kit
26. 1 permanent repair kit (rubber patches)
27. 1 radar reflector.
28. TPA for 10% of the capacity of the boat or 2 whichever is the greater.

LIFE BUOYS

1. Outer dia not less than 800 mm
2. Inner dia not less than 400 mm.
3. Grab lines must have a dia of not less than 9.5 mm and the length is to be not less than 4 times the outside dia of life buoy and secured in 4 loops.
4. Lifebuoys must be brightly visible in colour.
5. Fitted on each side at 4 evenly points retro reflective material 50mm x 100mm in size.
6. Capable of being dropped from a ht of 30 m without sustaining damage.
7. If a line is fitted then line must be 27.5 m in length.
8. The light must have intensity of not less than 2 candela and if flashing than 50 flashes/minute and provide with source of energy for at least 2 hrs.

Recap:

- Outer dia : not less than 800 mm.
- Inner dia – not less than 400 mm.
- Grabline dia : not < 9.5 mm and the length is not less the 4 time the outer diameter of buoy 4 loops secured in.
- Colour : highly visible (generally orange)
- Retro reflector tape : at 4 evenly spaced points : 50mm x 100 mm.
- Dropping height : 30 mts without sustaining any damage.

MARKINGS

1. Manufactures name or trademark.
2. Max height above the water line it can be stored if this exceeds 30 m.
3. name and port of registry of the ship.
4. light : must have an intensity of not less than 2 candela.

If flashing then must flash at a rate of 50 flashes per min. and be provided with a source of energy which will give this performance for a period of atleast 2 hrs.

Buoys with no lines – 2 bride wings / 2 self igniting.

Max weight of life buoy – 4 kgs. Min – 2.5 kg.

2 with lines

4 with lights

2 with smoke / bridge wing.

LENGTH OF SHIP

Under 100 m – min 8

100 m and under 150 –10

150 m and under 200 m – 12

200 m and over - 14

LIFE JACKETS

Cargo ships and tankers:

32 kg and over ; 125% of the capacity of vsl (min 4)

< 32 kg and over ; 100% of the capacity of vsl (min 2)

one 32 kg ; for each watch keeper and remote survival craft station and inflatable lifejackets

Passenger ships:

32 kg over ; 105% of capacity of vsl

< 32 kg over ; 10% of capacity of vsl.

One 32 kg ; for each watch keeper and remote survival craft station and inflatable lifejackets. Intensity: 0.75 candela for atleast 8 hrs.

- Jumping in water – 4.5 m height without injury max – 6m.
- Donning – 1 min
- Keeps head above water – 12 cm.

MARKINGS

1. Name or trade mark of manufactures.
2. name and call sign of vsl.

DIMENSIONS OF PILOT LADDER

Handhold stanchions ; dia – 32 mm

Above (b.w) height ; 120 cm

Gap between two ; min 70 cm, max 80 cm.

Man ropes without knots : dia – 28 mm

(if req by pilot) / (as per ladder) height - as per ladder.

Side ropes : dia – 18 mm

(between two) horizontal gap – 40 cm vertical gap – 30 – 38 cm

Spreader : length – 180 cm long breadth – 11.5 cm thickness – 2.5 cm

From bottom 5^{th} step must be a spreader.

After max 8 steps between spreader 9 th spreader. Ht of ladder above water level as per pilot.

Ladder must rest well over ship side.

No overboard discharge where ladder is placed. Deck (p.b. area) lit by fwd shining overside light.

Life boat with self igniting light and a responsible d.off to pick up pilot.

Space to be clear of any slippery spaces and obstructions – use of b.w ladder fastened.

Ships with height freeboard (more than 9 m) when no side door available: combination ladder. Pilot ladder must extend 2 mtrs above lower platform.

Accommodation ladder to rest firmly against ship side.

Should lead aft

Man slope 55 deg.

Lower platform horizontal. Rigid hand rails preffered.

WATER TIGHT DOORS:

1. Can operate from bridge, locally at door, remote control station.
2. Alarms on bridge, for opening, closing, status light for all doors, low hydraulic pressure.
3. An alarm will be activated out each door when moving until the door is fully opened or closed.
4. Never attempt to pass through a door that is closing.
5. Each door can be operated by a back up system in the event of power failure. (by hand hydraulics).

MAINTENANCE

1. Check for water tight seals for defects.
2. Check cleats and mounting for cracks and corrosion.
3. Check for hydraulic leaks.
4. Check doors seated correctly when closed and locking cleats are in place.
5. Clean up any oil or grease near watertight doors.
6. Report any defect to officer incharge of maintenance.

Emergency lighting

Use to illuminate

1. Muster point
2. Embarkation stn
3. Routes to survival craft
4. Survival craft areas and over side of the vsl.

Emergency lighting should be form a separate emergency power source.

PYROTECHNICS : (Valid for 3 yrs)

On bridge : 12 parachute flares / 4 ltr (4 mm dia, 230 m in calm wx) On life boat : 6 hand flares.

4 parachute flares.

2 smoke floats.

Parachute flares:

a. Can be fired to a lit of 300 m b. Fall at 5 m / seconds

c. Burn for 40 sec

d. Intensity 30000 candelas e. Burn red in colour.

HAND FLARES:

a. Burn for 1 minute.

b. Intensity 15000 candelas. c. Burn red in colour.

ORANGE SMOKE FLOATS:

a. Burns for 2 – 4 minutes.

b. Omits orange coloured smoke.

BRIDGE WING LIGHT/SMOKE SIGNAL

a. Orange in colour.

b. Produce for 15 min.

c. Intensity of light not less than 2 candelas and if flashing then it must flash at a rate of 50 flash / minute with a source of energy for atleast 2 hrs.

LSA REQUIREMENTS:

Passenger ship : 500 t or greater or 200 passenger more. Lifeboats – 50% each side (partially enclosed)

Liferafts – 12.5% each side with davit even on each side

Or

Lifeboats – 37.5% each side. Life rafts – 25% each side Rescue boats – 2 nos.

In any ease it is 125 % of the total persons onboard.

Passenger ships 500T or 200 persons.

Life rafts each side – 100% davit launched.

Life rafts 150% each side if these are not transferable. One rescue boat.

CPSC holder:

Persons 41 or less – 2

42 or 61 – 3

62 to 85 – 4

85 or more – 5

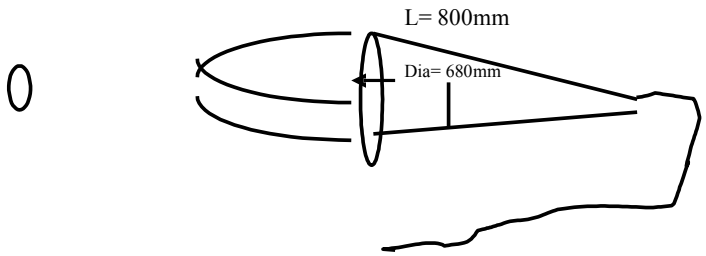
SEA ANCHORS

As per solas 1986 reg:

1. Conical in shape.
2. Porous material and slightly shift
3. Stable when towed at 6 knots.
4. Mouth shall open immediately on deplayment.

Length of painter attached to sea anchor : 30 m length

8mm dia.



SEA ANCHOR

Uses :

Reduces drift of the craft. Narrows the search area.

Improves the stability of the craft in rough wx.

Makes comfortable motion. Therefore reduces risk of capsize.

SEARCH AND RESCUE RADAR TRANSPONDER: SART

Purpose of sart – indicate position of survival craft. For vessel of 500 T or more:

Atleast one on each side of the vsl or one on each survival craft. Operates at 9 ghz, x-band 3 cm radar.

When activated, it will appear on the radar on 12 blips extending outwards from the posn of target.

When target is nearer it will become concentric circles.

Battery should be capable of 96 ltrs on standby followed by 8 hrs of continous interrogation.

EMERGENCY POSN INDICATING RADIO BEACON (EPIRB)

Purpose: to indicate posn of the person or the persons in distress.

Freq: 121.5 mhz : homing signal for air craft.

406 mhz : only call sign or maritime mobile service identity (mmsi) number.

1.6 mhz: also transmits posn with mmsi on gps feed given to it.

On 406 mhz EPIRB

1. Transmit signal to satellite
2. Set calculate the posn of epirb.
3. Relay the distress and posn to earth station.
4. Lut passes msg to mrcc.
5. MRCC is responsible for co-or with s/r opr. Initially and subsequently.

LUT: local user terminal.

MRCC : maritime rescue co-ordination center.

Requirement :

2 EPIRB each side.

Or

1 EPIRB and 2 sarts each side.

FIRE CONTROL PLAN

1. Location of control stations.
2. Remote controls.
3. Fire fighting equipments
4. Detection systems.
5. Fire zones.
6. Ventilation system.
7. Access to spaces.

A spare set of the plan are to be kept in a water tight container on the deck house. (for fire brigade)

FIRE WALLET

1. Muster list and location of muster pt.
2. Crew list (no of crew).
3. General arrangement plan
4. Safety plan
5. Cargo plan
6. Trim stability booklet.
7. Details of fired fire fighting system.
8. Details of w/t doors and ventilation.
9. Details of emergency fire pump.
10. Important telephone nos.
11. Pumping arrangement.

Kept near the gangway along with – ISC and l/buoy lit for the easy and nearest access to eb.

FIRE LOCKER.

DCP (powder) extra cartridges, foam detergent, spare hose.

Spare nozzle, safety harness, line, ba cylinders, f.mountfit, torch, fire bucket, fire arc.

Location of fire locker to be well marked in the fire plan, and any changes in fire plan and any changes in fire plan would require to be reconstructed.

INFO TO FIRE BRIGADE.

1. Where is the fire (location).
2. Means of access.
3. Ways of ventilating
4. Dtls of cgo together with stowage plan.
5. What fire steps have taken.
6. Any persons missing.
7. What fixed installation are in use.
8. Condition of ships services.
9. General arrangement plan.
10. Stability data.

FFA:

1. Fire main
2. Fire hydrant
3. Fire hose
4. Fire nozzle.
5. Emergency fire pump
6. Main fire pump
7. Fixed fire fighting installation (co2, halon, foam, water sprinkler)
8. Portable fire extinguisher.
9. ISC
10. Fire wallet.
11. Ventilation arrangements
12. W/tight doors , fire doors.
13. Fire man's suit.
14. Emergency fire alarms.
15. Fire blanket
16. Portable foam applicator.

FIRE FIGHTING APPLIANCES:

FIRE PUMPS:

Two pumps each capable of delivering atleast one jet of water simultaneously from each of any two hydrants, hoses, nozzles.

In addition to above one other pump such as g.s bilge, ballast pump shall be capable of delivering water to the fire main.

If a fire in any one compartment could put all fire main out of action.

An independently driven power operated emg fire pump outside machinery space (must be able to deliver atleast one jet of watch from each of any two hydrants). Cargo ships and tankers – 1000t or greater – 2 pump, 500t – 1000– 1 pump.

Passenger ships ; >4000t – 3 pumps, <4000t – 2 pumps.

Fire hoses:

- One hose for every 30 m length (not less than 5)
- Total hoses length atleast 60% of loa.
- One spare hose.
- In E/R and machinery spaces atleast 2 hydrant.
- 1 port and stbd. (hose and nozzle at each hydrant)
- All nozzle to be spray / jet with shut off facility.
- Hoses to be max 18 m length.
- Hose dia 64mm if unlined.
- Hose dia 45 mm if lined.

HYDRANTS:

Two jets of water on any part of the ship and 1 jet from an single length of hose. For tankers: isolating v/v's at end of accom and every 40 mtrs.

PORTABLE FIRE EXTINGUISHER

1. All of approved type and capacity not more than 13.5 ltrs and not less than 9 ltrs.
2. Spare charges for 100% of extinguisher.
3. Portable foam applicator consists of air foam nozzle of an indicator type capable of being connected to the fire main by a fire hose and portable tank of 20 ltrs.
4. Rate of foam 1.5 m3/min.

INTERNATIONAL SHORE CONNECTION

Common link between the vsl and shore for pressuring fire main line. One to be used on each side of the ship.

Out side dia-178mm, inside dia 64mm, washer – 8

Bolts and nuts – 4 nos (16mm dia: 150 mm in length, thickness flange – min 14.5 mm)

FIRE MAN'S OUTFIT

1. Fire proof protective clothing outer surface water proof.
2. Boots and gloves of rubber or non conductive electricity.
3. Rigid helmet.
4. Electric safety lamp (min for 3 hrs).
5. An axe (approved with cover)
6. Breathing apparatus
7. SCBA atleast 1200 ltrs capacity, function for 30 mins (40 ltrs/min).
8. Fire proof line attached to safety harness.

Fixed deck foam system.

1. Capable of delivering foam to ensure cargo tank area as well as into cot.
2. Control station outside and away from cargo area and readily accessible, simple and rapid operation.
3. Rate and foam not less than 0.6 ltrs/m2 min.
4. Sufficient foam concentrate to produce foam for at least 20 min.
5. Foam supplied through foam monitors/applications.

6. Capacity of any monitor at least 3 ltrs/ m2 min.
7. Capacity of any application not less than 400 ltrs / min and turn not less than 15 mtrs.

FOAM

- Min discharge rate not less than 0.6 ltr/min.
- System should be able to produce foam for atleast 20 min.
- Foam supplied for 3 monitor/applicator at lead at 1250 ltrs/min.
- Cap of foam monitor at least 3 ltr/min.
- Discharge cap of applicator at least 400 ltrs/min and should be able to throw the down not less than 50 mtrs.

INERT GAS

Cargo hold : 25% of gross volume of cargohold. Production in 72 hrs.

125% max disch volume

O2 level 5%

Maintain tank O2 level – 8%.

HRU (Hydrostatic release unit)

H2O type:

- Easy way to release life rafts, EPIRB's and other systems from a sinking ship.
- Light weight.
- Expiry every 2 years.
- After installation it remains on board without maintenance or service ashore for up to two yrs.
- (other approved HRU requires annual torting)
- it will release at all angles and needs only the required water pressure to activate.
- Designed to activate at a depth of between 1.5 to 4.0 mtrs.
- Weak link system, if used shall break under a strain of 2.2 +or- 0.4 kn (kilo Newton)

SCBA MONTHLY CHECKS

1. By pass central is fully closed.

2. Open cylinder valves. The whistle should be heard as the pressure raises in the gel. Check cylinder or fully charged.

3. Check for leaks.

4. With mask on face close cylinder value and hold breath. Observe pressure if it does fall more than set is not leak tight.

5. Check rubber part, o-rings and mask.

6. Clean mask with weak solution of teepol and dried out.

LIFE LINE SIGNALS

2 – pull - more line

3 – pulls - get me out

3 – pulls from operator – came out now

1 – pulls (for bellow) – more air.

FIRE EXTINGUISHERS

Water – colour red Foam – colour cream DCP – colour blue Co2 – colour black Halon – colour green

Fire blanket – colour red.

FIXED FIRE SYSTEMS

Co2 – for e/r and cargo holds. Halon – for e/r and cargo holds.

Water springle – ferries and paint locker

SCBA PREPARATIONS

1. Don the apparatus then adjust the harness for comfortable fit.
2. Open cylinder valve, put on mask and adjust to fit.
3. Inhale 2-3 times to ensure that the air is flowing freely from the demand valve and that the exhalation valve is functioning correctly.
4. Hold breath and make certain that the demand valve is shutting of on exhalation or that leakage if any isslight.
5. Close cylinder value and inhole until the air in the apparatus is exhausted. Listen for the low level audiable alarm, and watch the pressure guage return to zero. The mask should also crush onto the face indicating airtight fit.
6. Re open cylinder values.

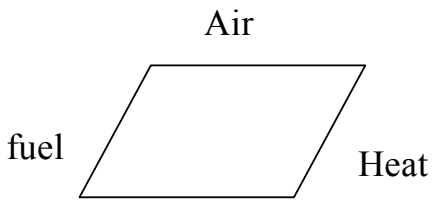
FIRE

F – find

I – Inform

R – Restrict

E –Extinguish



Types of fire : A, B, C, D, E.

Molecular chain reaction

A Type:

By solid material carbonation, organic compounds. Eg. Wood, pulp, paper, textiles etc.

B type:

By liquids such as petroleum, oil, paint etc.

Extinguish medium: foam, AFFF foam, Co2, Halon, DCP.

C type:

Gaseous fire, LPG, LNG, Etc. Extinguishing medium : DCP, Halon.

D type:

Metal fire eg: aluminium, sodium etc. Extinguishing medium: water, foam, AFFF, DCP.

E type:

Electronic fires, it considered to be possible cause of fire, rather than a type. Fires involving electricity will therefore because one of the previously mentioned classes of fires, once the power is shut off.

Fire extinguishers:

500t – 1 accm, s.space, c.station.

500t – 1000t – min 3 + 1 spare charge per ext.

1000t or over – min 5.

For tankers

>2000t – mobile foam appliance in pump room.

THE ANCHOR

Marking on the anchor:

a. A circle is to be marked is any conspicuous position on the anchor. b. With in the circles two items of information appears.

c. The symbol x represents the serial number of the test certificate. d. The symbol yyy represents the letters of the certifying authority.

Marking on crown and shanks anchor:

a. Markers name or initials.

b. Progressive number.

c. Weight of the anchor

d. Serial number of the test certificate

e. Letters of the certifying authority.

Tests on anchors:

1. Drop test
2. Bending test
3. Proof load.

Contents of anchor certificate:

1. Type of anchor
2. Weight in kg.
3. Weight in stock in kg.
4. Length of shank in mm, length of arm in mm.
5. Diameter of trend in mm
6. Proof load applied in tones.
7. Identification of proving house, official marks, and government mark.
8. Number of test certificate.
9. Number of tensile test machine.

10. Year of license.
11. Weight of the head of the anchor.
12. Number of date of drop test.

ANCHOR CABLE MARKING:

1. The markings are to appear on every shackle, at each end of the cable and every 30 mtr along its length.
2. Serial no. of test certificate.
3. The letters of certifying authorities.

PASSENGER SHIPS:

Alarms : manual alarm in accommodation spaces is control station continuously manned at all times. Crew alarm must be capable of independent operation.

Public address system in accommodation / service spaces.

Fire detection: all spaces fitted with automatic fire detection and alarm systems.

Springler system: in all part of ship may be fitted.

Fire control plan locations : one copy outside the deck home for shore side fire brigade.

Fire pump: each pump should supply the required 2 jets of water from the fire main simultaneously from separate hydrants.

Pump requirements: 4000t or more – 3 pumps.

Less than 4000t – 2 pumps.

Pump position:

Fire in are space should not put all fire pumps out of action.

CHECK LIST FOR SEQ

1. Lifeboat
2. Lifeboat davits.
3. Life raft
4. Launching instructions both l/boat, l/raft.
5. Portable radio equipments.
6. Lifebuoys
7. Life jackets.
8. Pyrotechnics.
9. Emergency lighting and alarm systems.
10. Fire control plans and other posters.
11. Fire/smoke detecting systems.
12. Fire pump and emg fire pump.
13. Fire hoses, nozzle, is couplings.
14. Fixed fire fighting system, portable fire extinguisher.
15. Vents, doors, skylights, remote stops, switches etc.
16. Fire mans outfits, breathing apparatus, including scba.
17. Pilot ladders.
18. Navigation equipments, gmdss equipments.
19. Record / maintenance of safety equipments.
20. Official log book

Additional for tankers:

1. Fixed fire fighting equipments/systems of the cargo p/p room.
2. Deck foam and sprinkler system.
3. Inert gas system.

BRIDGE FAMLIARISATION

1. Engine and thruster controls / telegraph recorder.
2. Steering gear, including manual, auto-pilot and emergency changeover and testing arrangements. (Bell book)
3. Automatic track keeping system, if fitted.
4. ECDIS and electronic charts, if fitted.
5. IBS system, if fitted.
6. Location and operation of ancillary bridge equipment (eg. Binoculars, signaling flags, meteorological equipment).
7. Stowage of chart and hydrographic publications.
8. Nautical publications – MIN, MSN, MGN.

TAKING OVER A WATCH

Fit enough / sound sleep / no alcohol / aware of time of starts of my watch, go 15 min prior to the start of my watch.

CHART ROOM

1. Any standing orders, verbal orders from master, night order book.
2. Check posn of vessel prior / present.
3. Any a/c during my watch.
4. No go areas well marked on chart and check.
5. Other important details reg nav marked / matched in chart.
6. Course plotted with wpts and chart corrected.
7. Routine/voyage/next / used – charts and location.
8. All respective publications.
9. Log book, bell book, night order book in place and any instructions in it.
10. Stationeries – location.
11. Instruments: chronometer/barometer/barograph/navtex/gmdss.
12. Wx – tides, forecasts, effects on vsl's co's and speed.

WHEEL HOUSE

1. Nav lights (morse, aldis, search light) emergency lt. Ok.
2. Sound signaling apparatus (whistle, fog bell, gong) ok. Verbal confirm.
3. Safety equipment – (pyrotechnics, epirb, sart, l/jackets, alarms) ok.
4. Communications – ok.
5. Instruments – will check, echo sounder, enps, course recorder, gyro – magnetic diff. Log in book.
6. Will check gyro repeaters alignment.
7. Will check for alarm system on bridge.
8. Look for ancillary bridge equipments (binoculars, flag, met equip).
9. See for RADAR (ARPA) (will check for and compare with actual target)
10. Will check for traffic density of area.
11. Nav hazards expected.
12. Possible effects of heel / trim / water density – squat during watch.
13. Any nav watch probs. Prev.
14. Will keep insight of deck work if going on.
15. Look out fit enough to carry out the job.
16. Will check look out / er stations / all repeaters / indicators/ dimmer etc.
17. Procedure for use of m/eng to maneuvers, when m/eng is on bridge control.
18. Will not touch radar and will not take over the watch if collision avoidance is going on.

HANDING OVER THE NAVIGATIONAL WATCH

First of all I will observe whether the relief is fit enough to carry out the watch.

CHART ROOM

1. Has the relief read the standing orders / night orders.
2. Will show him the posn of vsl on chart.
3. Indicate any forth coming alteration of course during his watch.
4. Indicate landmarks / light in view.
5. Indicate any hazards likely to be encountered during his watch.
6. Indicate towards the location of voyage / next / routine charts and pubs.
7. Wx forecast.
8. Tides.
9. Draught
10. Courses and errors.

WHEEL HOUSE

1. Status of nav lights and shapes.
2. Sound signaling apparatus.
3. The traffic density in the sight / vicinity (visually / radar).
4. Any hazards encountered / to be encountered.
5. Possible effects of heel / trim / water density / squat on ukc.
6. Speed and engine status.
7. Will inform him if I had any nav watch probs.
8. Deck crew working what / where any verbal inst for them.
9. Status of any other bridge equipment – necessary for the safe conduct of the ship including the provisions of lookout and helmsman.
10. I will plots last fix at an appointed time, complete maneuvers that are taking place and ask if the relief is ready to take over the watch.

PERFORMING THE NAV WATCH OR DURING THE WATCH

The officer in charge of the nav watch shall:

1. Keep the watch on the bridge will maintain lookout by sight and hearing and all available means.
2. In no circumstances leave the bridge until properly relieved.
3. Course, speed, posn to be checked at frequent intervals and nav aids to be made use of to keep the vsl on planned route during the watch.
4. Make sure to carry out master's standing orders.
5. Full knowledge of location and use of safety and nav equipments and their operating limitations.
6. To comply with irpcs while using radar – limitations.
7. Helm, engines, sound signaling apparatus at oow's discrection should be used. Timely notice for speed variation to er.
8. Aware of handling characteristics of vsl and its stopping distance and that other ships may/will have different handling characteristics.
9. Ensure that auto pilot and helms man are steering req co's steering motor change over if req.
10. Take errors in every watch especially alteration of course.
11. Plots and check position of vsl at frequent intervals.
12. Check radar performance once in a watch.
13. Check barometer and barograph.
14. A proper record shall be kept during the watch of the movements and activities relating to the navigation of the ship if maneuvering. Bell book.
15. Wx and reports.
16. Cargo condn, draught, ballast condn, er status.
17. Deck crew working in my sight.
18. If in any doubt and emergency call master.
19. Solas and coregs to be practiced at all time and and any action would be broad and in ample time.

RESTRICTED VISIBILITY – ACTION BY OOW.

1. Inform master
2. Inform E/R
3. Switch on sound signal.
4. Proceed at a safe speed.
5. Engines ready for immediate maneuver.
6. Post extra look out.
7. Exhibit navigation lights
8. Keep good radar watch.
9. Bridge door – keep open
10. Stop – deck work (since noisy)
11. Wheel on hand steering.
12. Channel 16 – to be monitored.
13. Follow col regs – rule 19
14. Make log book entry.
15. It is important that the oow show know the handling characteristics of the ship including its stopping distance.

CALLING MASTER

1. If restricted visibility encountered or suspected.
2. If traffic conditions or the movements of other ships are causing concern.
3. If difficulty is experienced in maintaining course.
4. On failure to sight land, a navigation mark or to obtain soundings by the expected time.
5. If unexpectedly sighted land or a navigation mark or change in sounding occurs.
6. On breakdown of main engines, steering gear or any essential nav equipments, alarms or indication.

7. If radio equipment malfunctions.
8. In heavy wx if any doubt about the possibility of wx damage.
9. If the ship meets any hazard to navigation, such as ice or derelict.
10. If any other emergency or if in any doubt.

PORT WATCHES ON BRIDGE:

1. First check any standing orders, ppe.
2. Meteorological warnings if any.
3. Rising and falling of tide (time and level) (tide table).
4. Draft
5. Company reports – wx reports etc.
6. Flags to be used/hoisted as per local / int regs and requirements.
7. Check for any unwanted instrument/ equipment running.
8. Bridge to be locked after the above checks.
9. While going down checking and locking of all store lockers and accm doors.

On deck

1. Adequate lighting on gangway.
2. isc and lifebuoy ready near the gangway.
3. Fire plan checked.
4. Mooring – fwd/aft checked, rat guards placed.
5. Overboard discharges checked.
6. Deck scuppers chocked/plugged and tightness checked.
7. All accm doors closed except one for use.
8. All access and doors, bo slippery spaces and obstcn.
9. On man on duty on gangway always.

Ask OOW:

By c/o: any ballasting/deballasting, bunkers and cargo.

Any stores to be record.

Any special instructions from port authority.

If intend loading cargo / or near vsl – type details, gangs involved, cargo gear – use. Engine status.

Crew onboard and how many ashore.

Initial steps:

1. Gangway and securing watch.
2. Antipilfarage watch.
3. Fire watch and antipiracy watch.
4. Wx look out.
5. FFA in order (ready for use).
6. Sufficient crew on duty with ppe and present or not.
7. To comply with local and int rule of country.
8. I will ensure the safety of man and material and prevent the environment from pollution at all costs.

Enter every event in the mate's logbook.

PORT WATCHES WITH CARGO

Same steps that of port watches without cargo further includes:

1. Any standing order from master or chief officer.
2. Cargo plan, stowage and stacking inst.
3. Loaded / discharged.
4. Bob for this port.
5. No. Of gangs working their break timings.

6. Stevedore / supervisor / tally clerk.
7. Any special cargo/dangerous cargo loading or discharging.
8. Forklifts in the hatch.
9. Condition of the ballast tanks.
10. Trim/list to be checked.
11. As per and swl of all cargo gears in use and their parts.
12. Winchman to be competent.
13. Checking of gear and cargo from the other side not underneath.
14. Check fire wire.
15. Deck to be well illuminated.
16. Enter every work of cargo in mates log book.
17. COSWOP to be used thoroughly.
18. Fresh water.

SHIPS POSTERS

1. Ships particulars.
2. Wheel house poster.
3. DF calibration card
4. Deviation card
5. Solas card no.1 (annexes iv distress signals).
6. Muster list.
7. GA plan
8. Fire plan
9. Emergency steering failure procedure.
10. LSA, FFA, placard
11. Ism checklist.

12. Garbage poster.
13. Emergency contact no.
14. Masters standing order.
15. Pilot ladder rigging arrangement.
16. Load line zone chart.
17. Sea state card.
18. VHF dsc alert sending procedure.
19. MF/HF dsc alert sending procedure.

SHIPS CERTIFICATES

1. Ships registry cert – life long
2. Load line cert – 5 yrs.
3. Int tonnage cert – l.long until str change.
4. Classification cert – 4 yrs annual exam – l.long until material change.
5. Interim cert of class – until next survey due.
6. Cert of seaworthiness – by class society.
7. Safety equip cert = dti surveyor – 2 yrs.
8. Safety rtg cert – 1 yr.
9. Safety r.telephone cert – 1 yr.
10. Cargo ship construction – 5 yr.
11. All coc – dot 5 yrs.
12. Derating cert – port health. – 6 months.
13. Derating exem cert – 6 months.
14. Anchor and cable cert – class society – life long.
15. Register of mach and chains dti – 4 yrs
16. IOPP (insurance) intermediate – 5 yrs.

17. Safe manning cert.

18. Cert of insurance to cover o.p

19. Stability info – from builder – life long.

20. Wire less broadcasting – dti (telecom)

LOADING OF DANGEROUS GOODS PREPARATIONS:

1. Supervision/ instruction from the master / mate along with cargo plan.
2. Cargo type, location.
3. Cargo details from shipper – Type of Packages/Quantity/Weight/SF.
4. ESTB communication wearing PPE for self and crew on duty.
5. Consult IMDG and perhaps loading manual too, and loading as per segregation table of IMDG.
6. Make sure the holds are ready for loading such cargo in all respects, no oil,wood,rags etc. In.
7. B flag or Red light shown.
8. Dangerous goods only to be loaded during daylight hours.
9. Stop other cargo, any bunkering if in progress, no hot work.
10. Check for Temperatures in HOLD.
11. Provision of special lifting gear to prevent damage to cargo when handling.
12. Compartments containing cargo having explosive or fire riser should have fire fighting equipments rigged for immediate use.
13. Appropriate measures should be taken to render any spillage harmless.
14. When there is Leakage or Escape of dangerous gases or vapours the area should be evacuated, ventilated, and tested before entry.
15. When dealing with spillages or the removal of defective packages, suitable BA sets and protective clothing should be provided as the circumstances dictate.
16. In the event of any accidental exposure to dangerous substances, references should be made to IMDG, Medical Guide for remedial action MFAG.
17. No smoking boards.
18. Crew on stand-by, port authority informed, dept. And heads informed.

Q. V/L in port. What checks for Gangway as duty officer.

Safety net, adequate lighting, No shore leave/unauthorized persons not allowed notice board, Gangway record book, Tel no. of fire brigade and port authorities, Life buoy, FFA of the place, International shore connection, Fire plan crewlist,ships GA plan, fire plan Watchman.

Q. Abandon ship orders during July/August in Indian Ocean, problems may face while launching life boat?

In these months we generally get choppy seas and lots of rains making visibility poor at times.

Generally Persian Gulf and Arabian Sea is hot and humid. On the other way Indian Ocean being hot and humid gets persistent rains making visibility poor at times. The same monsoon effect which is at western parts of Indian subcontinent including Gulf of Kutch is warm too. Along with rains, TRC develops at this seasons only. Same goes with east coast of India- Monsoon & TRC. After consulting the routing charts, the area around Scotra island is the most badly affected. Launching the lifeboat during the southwest monsoons is going to be a very dangerous task in itself. The master should keep in mind precautions to be taken while launching the boat in heavy weather.

Q. Stevedore informs duty officer loading finishes within one hour.

1. Inform master, CO & all dept heads.
2. Give 1 hr notice to E/R.
3. Inform the agent to book the pilot as per Masters order & instructions.
4. Control tests to be done once again although done 12 hours before once.
5. Final loading to go as per final instructions of C/O & stowage plan.
6. Not to allow for any list & attain required trim with correct loading.
7. Check for draught & final draught.
8. Secure & lash the cargo as instructed during.
9. Batten down the hatches & secure the gears.

10. No loose gear on deck, all back in the stores well secured.

11. Fire and anti pilferage watch to be maintained.

12. Check for stowage.

13. All lockers stores doors and hatch access to be closed.

14. Accommodation door to be closed except one.

15. On bridge – check & clean, arrange & ready flag for pilot, log book, bell book, & other required papers to be made ready. Make sure Gyro is always on, Pilot card.

16. Radar stand by, GPS WPT feeding complete, P/pub chart ready, all requisite pubs ready, wx report forecasts ready.

17. Sound signal to be tried out as port informed.

18. Nav lights to be tested, telegraph etc. inform and await for master's inst's, keep listening watch on

VHF CH 16/13 & local CH, crew stand by, confirm POB time from port.

Q: Agent brings new coil of wire rope? What checks?

Invoice- as per specifications compare with original indent, dia, chaffing, bristex and most important check for its test certificate. (as per factory) kept in ships office.

Q: Checks about fire extinguishers?

Check the catch for loose fitting.

Release mechanism such as strap and lock

Pressure gauge

Type

Installation as per location Last serviced, date of expiry Color coding

Free of rust

Q: Loading of iron / steel pipes / plates?

Check bilges are working – satis

Lashing arrangements – laying of wire, welding points eyes bars. Checking of fire alarm system

Laying heavy damages and chocking by woods Loading as per stowage plan, loading manual and c/o. Final lashing complete.

If using ship gear – make sure to check swl, tank top stresses check.

Q: What information you get in sailing directions / pilot book?

Details regarding the coast – approach (particulars area) Dangers / no go areas

Local wx

Local / harbour rules, port authority

Working channel etc

Region a/b, buoyage system

Panoramic / photographic view.

Area tidal information, depth / draught

Dock details.

Q: Information in routing chart?

Monthly wx conditions – wind, sea, current, warning

Gale warnings

Iceberg

Freezing line / zone

Recommended routes and distance

Covers and Particular Ocean

Zone

Q: Fire in Engine room duty as duty officer?

Raise fire alarm

Inform master quickly

Head count at muster station

Stop eng and machinery and evacuate every one from er

Close all vents, blowers, doors.

Cut fuel supply and isolate er. Start em gen.

After all evacuated release co2 with masters instruction and permission. Ready lifeboat for launching. Boundary cooling if possible.

Inform nearest port and follow their instructions. Relay distress.

2 persons with scba in to check status after 24 hrs.

Emg gen should be started prior for deck lightings etc. Switching on radar – precautions.

No obstruction near the scanner.

No person near the antenna / scanner. Stby

Performance monitor, blind sector.

Q: RECOVERY FROM SURVIVAL CRAFT

1. Hospital : prepare hospital to receive the causality provide medical aid – first aid

expect to treat for shock and hypothermia.

Stretcher, blanket, warm clothing's, hot drinks wake ready.

2. Rescue apparatus: scrambling nets and boarding ladder rigged over side. Together with a guest warp.

Derricks and deck cranes swang over side to recover survival craft, provided the swl of the lifting gear is adequate.

Cargo nets, cargo baskets is useful for recovering injured people.

3. Try to maneuver the rescue vessel to windward of the survival craft to create a lee, to aid the recovery.

4. Establish communication with the survival craft ASAP.

5. Acknowledge distress signal, flares by sound or light signals.

6. Enough heaving lines ready, lta (rocket) ready.

7. Maintaining normal bridge watch, checking navigational hazard in the vicinity. Display correct flag signals. Keep other shipping as well as the coastal radio station. Informed of movement and situation.

RECOVERY FROM WATER.

1. Preparations as recovery (survival craft)

2. Weather conditions: own boats if used is best method for recovering a perform from water. Ships motor boat is desirable and this should be launched within sight of survivor in a lee made by the parent vessel.

3. Injured persons to be taken aboard individually using stretchers.

4. Crew members to always wear appropriate ppe with safety harness and life jacket during the rescue operations.

5. Shooting of rocket line towards survivors may prove worth in dangerous sea conditions when it is difficult to launch boat.

6. Life buoy is worth to be provided to survivors since it is difficult for survivors to float long in water.

SEARCH AND RESCUE

1. Take the bearing of distress message if radio direction finder fitted.

2. Re transmit distress message.

3. Maintain acontinous listening watch on all distress frequencies.

4. Consult IAMSAR manuals.

5. Establish communications with all other surface units and sar aircraft involved in sar operation.

6. Plot position, courses and speeds of other assisting units.

7. Monitor x-bank radar for locating survival craft transponder (sart) signal using 6 or 12 nautical mile range scales.

8. Post extra look outs for sighting flares and other pyrotechnic signals.

ABANDONING SHIP

1. Broadcast distress alert and message on the authority of the master.
2. Instruct crew members to put on life jackets.
3. Wear adequate and warm clothing
4. Instruct crew members to put on immersion suits, if water temp is below 16 deg c
5. Order crewmember to lifeboats stations.
6. Prepare to launch lifeboats / life rafts.
7. Ensure that lifeboat sea painters are attached to the ship.
8. Embark all crew in the lifeboats / life rafts and launch.
9. Ensure lifeboats / life rafts remain in safe proximity to the ship and in contact with each other.

OWN VESSEL AGROUND

1. Stop eng
2. Call or inform master and er
3. Sound general emg alarm
4. Close watertight doors, if fitted.
5. Check depth / sounding using echo sounder, draft considers.
6. Maintain a vhf watch on ch 16, if appropriate on ch 13.
7. Exhibit lights / shapes and make any appropriate sound signals. Nav lights off.
8. Switch on deck lights at night.
9. Check hull for damage.
10. sound bilges and tanks (db, fw, bkr, er.)
11. visually inspect compartment where possible.
12. Sound around ship.
13. Determine which way deep water lies.
14. Determine the nature of the seabed.

15. Damage control party to access the damage.

16. Obtain information on local currents and tides, particularly the details of time of rise and fall of the tide.

17. Reduce the draft of the ship.

18. Make ships posn available to radio room / gmdss station, satellite terminal and other automatic distress transmitters and update if necessary.

19. Broadcast distress alert and message if the ship is in grave and imminent danger and immediate assistance required, other wise broadcast an urgency message to ships in the vicinity.

20. Log entry, inform to port and obey the orders of port.

21. Pollution.

DUTIES OF SAFETY OFFICER

1. Supervise and control ships safety systems.

2. Maintain / care / testing of all life saving appliances (lsa)

3. Maintain / care / testing of all fire fighting equipment (ffa)

4. Preparing requisitions for (2 and 3) and confirm they comply with req and reg.

5. Supervise boat drill.

6. Supervise fire drill.

7. Familiarize new crew with the location of safety equipment and their uses.

8. Attend safety committee meetings.

9. Be aware of remote alarm points.

10. Update muster list as required.

11. Show safety videos for all ships personnel.

12. Maintaining of all proper record of lsa and FFA equipments.

13. Carryout company safety policies on board effectively.

DUTIES OF OOW / 3rd officer

He is a masters representative and masters trust lies over him along with responsibility to carry out safe and sound navigational watch and duties.

1. Maintain a safe navigational watch.
2. Maintain a proper look out by sight and hearing.
3. Follow col regs to avoid collision and traffic.
4. Familiarization with all navigational equipment
5. Check vsl's course regularly.
6. Plot vsl's position regularly.
7. Monitor vsls progress along intended route.
8. Compare gyro comp with magnetic compasses.
9. Take compass error once a watch and every a/c of course.
10. Carry out radar plotting.
11. Record bridge activities in log book.
12. Beware of vsl's turning circle and stopping distance.
13. Inform master any event / moment affecting vsl's progress.
14. Understand handing over watch procedure.
15. Make periodic checks on nav equipments.
16. Be aware of safety equipments on bridge and their operation.
17. Be fully conversant with pollution prevention obligations and regulations.
18. General communications.
19. Ensure fire patrol, antipiracy watch maintained at all times.
20. Gmdss watch keeping.
21. Monitor cargo operations.
22. Monitor and control machinery.
23. Supervise routine work on deck.

24. Supervise rigging of pilot ladder, gangways, mooring, fire wire and bunker ops and man and material including prev of pollution at all times.

ANCHOR DROPPING

1. Establish communication.
2. Take orders / information from the master. Which side, how many shackles.
3. Wear PPE. Collection of designated crew with PPE.
4. Take right tools for the job.
5. Check for the lighting.
6. Check for power on deck / winch.
7. Unnecessary obstruction, slippery spaces, ropes near cable – remove.
8. No overboard obstructions.
9. Check winch (wind lass) movement.
10. Will make sure brakes one tight since connecting to gear.
11. Lashing removed.
12. Gear engaged.
13. Checked overboard side.
14. Lower up to water level. (cock the bill) put back on brake and out of gear.
15. Inform master on bridge and await instructions for letting go.
16. When ordered let go – release full brake till it touches the ground and move stopped. Allow further to drop up to require level and start controlling the brake.
17. Once informed to stop / hold on. Immediately put on the brakes. Count the req shackle is at in.
18. Inform from time to time the position of cable to bridge. Once anchor touches the ground.
19. Day / night signal exhibited.
20. brakes tight, relating done, devils clause, ch stopper etc.
21. Wait for the vsl to be brought up and inst from master.

22. Will take care of safety of life aspect throughout the operation. Note: always make ready both anchors for letting go.

Same procedure for heaving / aweight.

PREPARATION FOR ARRIVAL IN PORT

1. In prep P.Plan pre pilotage info exchange
2. P.Plan update
3. ETA …….. Local regulations… (details of dangerous/hazardous goods carried)
4. Is it necessary to arrange Cargo/ballast?
5. Following equipments been prepared and checked: CCC. SD. MPAS
6. Steering gear…. Tested… engaged in manual …. Helmsman before maneuvering

*Usage of 2 steering motors for pilotage

7. Engines, been tested and prepare for maneuvering
8. Pilot card – completed and pilot embarkation arrangements?
9. VHF and Radio check – for various series (VTS, Pilot, tugs, berthing inst.)
10. Port made arrange of any special berthing requirements
11. Prepare mooring stations and anchor stations with Masters Info…

PREPERATION FOR SEA / PRE SAILING CHECKS / CONTROL TEST

1. Passage plan: for the intended voyage…. Charts, books, Wx, Nav. Warnings…
2. Equipments: checked and ready for use… RPM indicator, emg engine stop, bridge and engine room telegraph, CPP Ind and controls it fitted
3. Equipments tested, synchronized and found ready for use
4. Communication: facilities including- Bridge, engine room, mooring stations, portable radios, VHF comm. with port authorities
5. Navigation and Signal lights
6. Sound signaling apparatus
7. Steering gear – manual – auto – emg. Change over and rudder indicators,

- full rudder move accordingly
- timing of rudder movement from hard over to hard over ensure
- visual inspection of…
- operation and means of communication between bridge and steering compartment
- bow thruster motor to be checked

8. Window wiper / clear view screen arrangements
9. Is ship secure for sea:

- Cargo and cargo handling gear / equipment
- Anchors clear away for use
- Cargo / passenger details
- Stability and draught info
- Are all crew o/b and shore persons ashore? Stowaway check
- Are pilot embark / disembarkation arrangements in place
- Deficiencies reported and note of above made in log book

HEAVY WEATHER PREPARATIONS AND CHECKS

1. Inform Master, E/R, Crew and other departments such as Galley etc.
2. When Master on Bridge – ask him if reqd to plot alternate course, show him the recent Wx reports, square and secure up the bridge, wear proper PPE and organize respective crew with their PPE on.
3. Check whether all movable objects been secured above and below decks particularly in E/R, Galley and store rooms, paint locker, boson store
4. Check whether ships accommodation been secured and all ports and deadlights closed
5. Boat deck – life boat well secured, check gripes
6. Check for Wx deck openings being secured – hatch Acers, doors, air and bilge pipe to be covered, sounding caps to be closed, mooring winches to be covered electrical ckts
7. Further on deck

- Rigging of safety line or hand rope on the deck on both the sides from fwd to aft

- Hatches to be batten down
- Gangway to be extra lashed and properly secured
- Closing of all watertight doors
- Loose mooring ropes to be in and lashed
- All loose gears, drums etc to be secured and lashed
- Anchor to be extra lashed and secured, spuring pipe to be covered
- Scrupers and outlets to be kept open on deck
- Soundings must be checked
- Everything checked and done must be logged down and inform master
- Ballast condition to be checked and conveyed with c/o and master
- FSE to be reduced
- Cargo gear lashings with hook
- Cargo lashings to be tightened if loaded

8. Crew to be warned to avoid using / going to upper deck areas as it is dangerous in heavy wx
9. Instructions to be issued on following: monitoring Wx reports, transmitting Wx reports to the appropriate authorities or in case of tropical storms, danger messages in accordance with SOLAS

MAN OVERBOARD

As OOW actions to be carried out when Man Overboard

1. Immediately wheel hard over to causality side
2. Release MOB (smoke signal) apparatus with light and life buoy on the side of the crew member has fallen overboard
3. MOB button on GPS
4. Sound Oscar ‘3 prolonged blasts on whistle” and repeat in necessary
5. Post a lookout with Binoculars and instruct him for continues watch on MOB
6. Hoist signal flag “O”

7. Commence a recovery maneuver such as Williamson's turn

8. Change over to hand (manual steering)

9. Note ships position, wind speed and direction and time

10. Inform Master if not on bridge and engine room

11. Place engines on stand by

12. Muster rescue boat crew

13. Prepare rescue boat for possible launching (crew wearing Life jackets and safety harness PPE)

14. Distribute portable radio "VHF" for communication Rig pilot ladder / nets to in recovery

15. Make ships position available to radio room / GMDSS station

16. Broadcast Urgency message to ships in the vicinity

17. Prepare Hospital (may be suffering from hypothermia etc..)

18. Have long heaving line, L.Buoys, LTA ready if bad weather persists

Use of IMSAR if does not find causality

RECEIVING PILOT – PREPARATION

1. Wear proper PPE, orders from Master which side pilot ladder and how many mtrs above

2. Establish communication with bridge

3. Take required /sufficient crew with PPE on

4. Check that the way for pilot is clear of obstruction

5. Checking of pilot ladder, should be free of oil and grease and any other damage (adequate lighting, clear of any oil patches, slippery space and any obstructions)

6. Pilot ladder to be rigged on the strongest point (also generally towards well rested to ship side /or as required by pilot). No OB discharge. Height as per/ pilot, life buoy with line and light near the pilot ladder.

7. Inform about the progress to bridge/master. Check personally and to try to locate pilot boat and report.

8. Crew put on standby. Once P.O.B- to pilot flag.

Introduce pilot card DESH

1. Inform the pilot about ship's head, speed, Engine setting, Draught.
2. Inform him about the location of LSA for his use.
3. Discussion of passage plan with him and agreed with master: ind.

- Radio communication and reporting systems (ask him any Nav warning in the recent)
- Bridge watch and crew stby arrangements.
- Deployment and use of tugs(important).
- Berthing and anchoring arrangements. (on berth which lines to go, first arrangement, any obstructions, example crane etc on berth).
- Expected traffic during transit.
- Pilot change over arrangements if any.
- Fenders requirements. Vessel's position to be plotted frequently and checked.
- Completed pilot card to be handed over to pilot.
- Showing him WHEEL HOUSE POSTER.
- Responsibilities within the Bridge team for the pilotage been defined and are they clearly understood.
- Languages: on bridge between ship pilot and shore.
- Look out arrangements explained to pilot.
- Crew stby arrangements explained to the pilot.
- Progress of the ship and execution of order(HELMSMAN, OOW and to pilot) to be monitored by master and OOW.
- Progress of the ship during the pilotage to be briefed to E.R and ship's crew.
- Correct lights, flags, shapes being displayed.
- If action by pilot not satisfactory, I'll inform master. If master is not on bridge I'll discuss with pilot and safe clarification from him. If not satisfactory then I'll take charge.

PILOT CARD

1. SHIP'S PARTICULARS: Name, C.S, displacement, DWT, Year built, LOA, breadth, bulbous bow Y/N, draught, forward aft, midship's, port anchor, stbd anchor, shackles.
2. LOADED/BALLAST MANIFOLD.
3. AIR DRAUGHT.
4. ENGINE: Type, manpower, RPM/pitch, loaded speed, ballast speed.
5. STEERING: Rudders. Type, max, propeller ..cpp..Thrusters, bow power, stern power, steering
6. EQUIPMENT CHECKED: Ready for use- anchors, whistle, flags, x-band radar, s-band radar, speed log, echo sounder, ENPS, compass system, steering gear, rudder /rpm / rot indicators, VHF, mooring winches and lines.
7. EQUIPMENT OPERATIONAL DEFECTS.
8. OTHER IMPORTANT DETAILS.
9. MASTER'S NAME AND DATE.

SHIP TO SHORE MASTER/PILOT EXCHANGE

1. Ship identity.
2. Additional communication information.
3. Pilot boarding.
4. Ship particulars.
5. Anchors.
6. Manouvering details at current condition.
7. Main engine details.
8. Equipment defects relevant to safe navigation.
9. Other important details(berthing restrictions)

SHORE TO SHIP PILOT/MASTER EXCHANGE

1. Ship requesting pilotage details.
2. Originating authority.
3. Pilot boarding instructions.
4. Berth and tug details.
5. Local weather and sea conditions.
6. Details of the passage plan.
7. Regulations(VTS report, anchor/look out alter, max, all … draught).
8. Other important details including non hazards, ship movements.

ANCHORING

1. Has the anchoring plan been prepared taking into account.

- speed reduction in ample time
- direction / strength of wind and current
- tidal stream when maneuvering at low speed
- need for adequate sea room particularly to seaward
- depth of water type of sea bed and scope of anchor cable required

2. Have the ER and anchor party been informed of the time of standby for anchoring
3. Are the anchors ready for use
4. Are the light / shapes and sound signals for ready for use
5. Has the anchor position of the ship been reported to port authority

ANCHOR WATCH

1. Determine and plot ships position on the appropriate chart ASAP
2. Take bearings of fixed navigation marks or readily identifiable shore objects at frequent intervals to check that vsl remains securely at anchoring
3. Ensure proper lookout maintained
4. Periodic inspection rounds to be made of ship
5. Meteorological and tidal conditions to be observed
6. Immediately notify Master and take necessary steps if vsl drags anchoring
7. Readiness of machinery and M/engine as per Master instructions
8. Notify Master if visibility deteriorates
9. Proper lights /shapes / sound signals as per regulations to be made
10. Preventive Measures to prevent environmental pollution as per pollution regulations
11. All navigation equipments to be made use of to assist navigation, Ex., Echo sounder, radar, Met equipment, telegraph and lights/shapes etc..
12. Fire watch, anti pilferage watch, anti piracy watch, no smoking regulations, no unauthorized boards, no over board discharge, anchor cable to view at each tide changing time, VHF watch to be maintained

AFT STATION-(FWD Stations almost same)

1. Mooring arrangements from Master (first line to clear or go? Etc.,)
2. Berthing arrangements – along side – any obstructions, position of bullards etc.,
3. Tug arrangements, How many which side, our / their rope?
4. Fender arrangements and established communication
5. I will go to AFT station will full PPE on and crews too, giving full consideration to the safety man/ material and environmental pollution. Organize and instruct the crew on station
6. Scuppers to be locked
7. Area to be free of slippery spaces and obstruction

8. Adequate lighting
9. Mooring lines, heaving lines clear
10. Bow stopper on strong point at Bit.
11. Power on deck (winches)
12. Winches (capstan) checked
13. First line, heaving line ready
14. Rat guard
15. People / crew clear of the line, safety aspect important
16. Lines well clear of the propeller
17. One man heaving, one man coiling – together stopping and postioning
18. Safe distance from Jetty to be given to Master

NAVIGATION IN COSTAL WATERS

1. Following considerations while preparing passage plan

1. Taking in advise /recommendation from sailing directions
2. Ships draft in relation to available depth of water
3. Effect of Squat on under keel clearance in shallow water
4. Tides and currents
5. Wx particularly in areas more susceptible to poor visibility
6. Available navigational aids and their accuracy
7. Which positions fixing methods to be used
8. Day / Night time passing of danger points
9. Traffic likely to be encountered flow type and volume
10. Any requirements for TSS / Routing Scheme

2. Monitoring of local / costal warnings broadcast
3. Is participation in area reporting systems recommended including VTS

4. Is the ships position being fixed at regular intervals

5. Checking and testing of equipments at regular intervals

- Gyro / Magnetic compass
- Checking and testing Manual steering before entering costal water if the auto mode is in usage for a long time
- Performance of Radar and its Head line alignment
- Echo sounder

6. Is the OOW prepared to use the engines and call a lookout or Helms man to the bridge

7. Appropriate measure and arrangements to be made to safe guard the environment from any pollution and there by complying with applicable regulations of pollution

COLLISION

1. Sound General Emergency alarm
2. Call Master, inform E/ Room
3. Maneuver the ship to as to minimize the effect of collision
4. Close water tight door and automatic fire doors
5. Maintain VHF watch on CH 16 and if appropriate on CH 13
6. Switch on deck lightings at night
7. Master passengers, if carried, at emergency station
8. Make ships position available to radio room / GMDSS station, satellite terminal and other automatic distress transmitters and update if necessary
9. Check for fire / damage
10. Sound and monitor the effected areas, bilges and tanks
11. Visually inspect compartment where possible
12. Minimize the ingress of water by using bilge / other pumps
13. Offer assistance to other ships
14. Make the hospital standby for any medical emergency

15. Broadcast, distress alert and message if the vessel is in grave and imminent danger and immediate assistance if required, otherwise broadcast Urgency message to the ships in the vicinity

SEEING VESSEL AGROUND – ACTION

1. Stop engine
2. All way off
3. Call Master, inform to Engine room
4. Check Echo sounder sounding
5. Tidal data – time of High / Low water, current etc., draught condition
6. Establish communication with the vessel and conform their status / condition if they require any assistance
7. Time of grounding

FLOODING

1. Sound General Emergency alarm
2. Call and inform Master (ASAP) E/R info., all dept. Info.,
3. Close water tight doors if fitted
4. Sound ballast and tanks, monitor continuously
5. Identify location of incoming water
6. Dudge the rate of ingress of water
7. check bilge pump for operation
8. Check auxiliary pumps for backup operation as required
9. Cut off all electrical power running through the area
10. Shore up area to stem water flow
11. Make ships position available to radio room/ GMDSS station, satellite terminal and other automatic distress transmitters and update as necessary

12. Broadcast distress alert and message if the ship is in grave and imminent danger and immediate assistance is required otherwise broadcast an Urgency message to ships in the vicinity.

MAIN ENGINE or STEERING FAILURE

1. Inform Master
2. Prepare for anchoring if in shallow water
3. Exhibit NUC shapes / lights
4. Commence sound signaling
5. Keep and good VHF watch
6. Track / monitor check vessels position, rate of drift
7. Check of any navigational hazards, approaching traffic
8. Change over from auto steering to Manual mode
9. Check for immediate WX conditions
10. Broadcast Urgency message to ships in the vicinity, if appropriate
11. Incase of Only Steering failure

- inform E/Room
- engage emergency steering
- Take way off the ship
- Prepare engines for maneuvering

BEACHING

Taking the Ground intentionally Cause:

- to prevent imminent collision
- to prevent vsl from sinking when loss of water tight integrity is there due to collision / damage / holed etc
- to scrap yard for demolition, ex., age factor / cord etc.,

Beaching done:

- Generally at light ship conditions
- Minimum possible ballast, to maintain required trim, since beaching on gentle sloping beach
- Maximum high water incase of demolition
- Taking the wind and the current in favor of demolition
- Maximum engine power (rpm)
- When beaching for emergency above factors doesn't count much but should be beached fast such that it can re float with tide when required. Pollution is important factor to consider

Dock Workers:

Q:Repairing team, Shore labor party joining the vessel and the vsl proceeding to anchor, duty as anOOW?

Will

1. Check their names
2. Head count
3. Meet their head / supervisor
4. Seek documents
5. Recheck and confirm their identity
6. Allow them on board and take them to Master along with their documents
7. Will put their names in Muster list
8. To their designated cabins
9. Show them the location of their Life jackets, port hole exit, nearest fire extinguisher permission), nearest Emergency exit, Emergency alarm etc.,
10. To the boat station
11. Familiarize with the drill and their duties
12. Demonstration of L.S.A
13. Instruct them not to touch equipments without permission
14. Not on deck unnecessary
15. Not to enter any confined spaces
16. No hot work without permission

17. Show them their smoke room

18. Instruct them not to create pollution in any case. Not to through anything over board

19. Familiarize them with the vessel

20. Instruct the ships crew keep watch on any unexpected doing by and inform duty officer regarding it immediately

21. Comply and keep safety of life at prior most

22. Make sure they follow No Smoking regulations of vessel

23. Make sure they wear Personal Protective Equipment all the time

WHEEL HOUSE POSTER

1. Ships particulars: Name, C.S., GRT, NRT, Max Displ., DWT, Cw At Summer, Full Load Draft Etc…
2. Draft: at which the maneuvering data were observed, loaded, ballast
3. Steering particulars
4. Propultion particulars
5. Anchor chain
6. Thruster effect at trail conditions
7. Draft increase (loaded)
8. Turning circles
9. Man overboard rescue manoeuver
10. Deviation card
11. Muster list
12. Time zone chart
13. Load line zone
14. ME correction

MOOR

RUNNING MOOR: Drop anchor, run up, drop second anchor, fall back

STRANDING MOOR: Drop anchor, fall back to tide, drop second anchor and heave back to first

OPEN MOOR: Lay second anchors on a spread ahead and tie to them both

BALTIC MOOR: Cable forward – insurance wire aft

MEDITERRANIAN MOOR: Both cables fine on each bow and stern fast to quay

COMPASS

An instrument used to indicate heading of the ship and to obtain bearings. Two type of compasses:

1. Gyro compass.
2. Magnetic compass.

COMPASS ERROR: The difference between in the direction indicated as north by the compass and the true north is compass error. In other words the difference between the compass north and the true north is the compass error.

Compass error named East or West:

Three methods determining compass error:

1. Azimuth: true bearing of the heavenly body calculated at a given time in GMT.
2. Amplitude: True bearing of the heavenly body calculated at a given time in GMT made when body is on the horizon, rising or setting.
3. Transit: A bearing is one in which to conspicuous terrestrial object are in line, one in front of the other.

Gyro compass: Advantages:

1. Its reference point is true north.
2. Can be connected to any amount of equipments which requires compass feeding.

Disadvantages:

1. Complicated mechanical device.
2. requires constant power supply.

Gyro compass error referred to high or low.

MAGNETIC COMPASS: Advantages:

1. No mechanical moving parts.
2. Does not require electrical power. Effected by two errors: deviation and variation.

By using transmitting magnetic compass(TMC). It is possible to feed magnetic compass to any number of

equipment requires compass feeding. Method of steering"(four methods):

1. Automatic(auto pilot)
2. Manual(by Helmsman)
3. Remote steering (with extended cord)
4. Emergency steering.

Off course alarm: This equipment maintains a continuous watch on the vessel's course so that any break down of the Gyro compass or auto pilot is immediately brought to the notice of the OOW.

A three second delay is introduced so that the alarm is not sounded by momentary contact during violent

motion of vessel in heavy weather.

SPEED MEASURING DEVICE:

1. The stream log
2. Dynamic pressure log.
3. Impeller log.
4. Electromagnetic log.
5. Doppler log.

Correction of deviation: Following four provisions are provided to reduce the compass error(it can not be totally eliminated)

1. Flinders bar.
2. Spheres (two numbers placed port and stbd).
3. Heeling error magnets.
4. Horizontal magnets- they compensate for the forward and aft and athwart ships components of the semi permanent magnetism.
5. PEWRUS: It is an alternative to azimuth mirror. It enables the navigator to obtain bearings of

shore object particularly when the line of sight of the azimuth mirror on the standard compass is obscured.

MARINE CHRONOMETER:

1. Used for the purpose of navigation.
2. Only one instrument shows / record GMT.
3. To be stowed in a place free of vibration and maintained at a regular and even temperature.
4. Ideal place is chart room or wheel house.
5. Two-day chronometer should be wound daily at the same time.
6. Winding key known as “tipsy key”.
7. Full wound achieved by after 7 wounds.

8. Never turn the hands of chronometer in anticlockwise direction.
9. After starting it should be rated against a time signal on a daily basis.
10. All chronometer errors should be recorded in chronometer error book.

MOORING PREPARATIONS

1. Ensure all personnel are wearing the correct PPE.
2. Check and maintain good communication at all times with bridge and obtain permission to go stations.
3. Obtain power on deck.
4. Ensure adequate lighting is required on mooring decks.
5. An experienced winch operator must be used at all times and winches must be conditionally tended.
6. Prepare winches, remove covers, put into gear and test operation.
7. Unstow, wires, ropes, stoppers, fenders, heaving lines, gant lines, messengers, rat guards etc make ready for use.
8. Never stand in the bight of a rope and always maintain a position of safety.
9. Be aware of the dangers of back-lash if a man made fiber rope parts.
10. Ensure sufficient number of men are available at each end of the vessel during mooring operations.
11. Find out mooring plan from master.
12. Make own plan on how to propose to achieve masters plan.
13. Brief all persons about mooring plan to make sure that they fully understand it.
14. Wires must not be used directly from a fixed real. It should be flaked out before use.
15. Checks all roll on and fair leads for dangers and smooth operation to avoid rope damaging.
16. Leads must not be too sharp, in case of wires a snatch block can be used to impose the lead.
17. Never put rope and wire on same bit / lead together. Do not put eye of rope or wire on the bit.

18. Put wires as per DTP approved manner.

19. Two men on barrel, one handling, one coiling down.

20. Never handle rope and winch control at same time.

SHIP ROUTING

The purpose of ship routing is to improve the safety of navigation in concerning areas and in areas where the density of traffic is great or where the freedom of movement of shipping inhibited by restricted sea room, the existence of obstruction to navigation, limited depth or unfavorable meteorological conditions. Following are the matters related to ship routing:

1. Routing system
2. TSS
3. Traffic separation zone or line
4. Traffic line
5. Round about
6. Inshore traffic zone
7. Two way route
8. Recommended track
9. Deep water route
10. Precautionary area
11. Area to be avoided
12. Established direction of traffic flow
13. Recommended direction of traffic flow

SNUBBING ROUND

This turn is needed when there is no sufficient sea room and tighter turn will required. This is achieved by means of one of the ship's anchor.

1. Frequently practiced with tidal stream from stern.
2. speed of vessel to be reduced so that she can make steerage way.

3. Let go either port or stbd anchor at short stay.
4. allow the cable to lead aft dragging the anchor along the bottom.
5. The cable will act as a spring reducing headway counting the bow towards the side of anchor dropped.
6. Maximum helm and engine power to bring vessel through 180 degrees where to apply the break is very important. The anchor party is briefed about it before hand.

GRAIN REGULATIONS (IMO 240 E) (MSN-1253)

GRAINS: Wheat, corn, rice, pulses, seeds, oats etc. Minimum stability requirement:

1. No more than 12 degree list after assumed shift of grain. Full compartment-grain shift- 15 degree, partly filled compartment-25 degree grain shift.
2. Initial GM of 0.3 m.
3. Upright before sailing.
4. A minimum residual stability as specified

Angle of flooding 40 degree, 0.075 m radius.

Every ship intended to load grain should have:

1. Document of authorization.
2. Grain loading manual.
3. International code for the safe carriage of grain-IMO 240 E Also refer SOLAS annex 6 regulation 9.

SQUAT

- Bodily sinkage of a vessel when underway and m/w
- Most noticeable in shallow water.
- Its value will vary proportionally to the square of the speed of the vessel.
- Forward draft increases and trim changes when m/w through water
- Steering becomes critical.

- Speed of the vessel has the strongest influence on the amount of squat.

INTERACTION

Interaction is the reaction of the ship's hull to pressure exerted on its under water volume.

Interaction occurs in following cases:

1. Overtaking.
2. Between two vessels on reciprocal courses.
3. Between a bank and the vessel.
4. Between vessel's hull and sea bed in shallow waters.
5. In narrow channel- between a moored vessel and passing vessel.

TURNING SHORT ROUND CIRCLE

Right hand propeller vessel will turn more easily to stbd than to port.

1. Start from port side of the channel to have maximum head reach movement.
2. Rudder "hard a stbd", engines "ahead", do not allow vessel to gather much head way.
3. Rudder "mid ship", engine "astern".
4. Stern way is gathered, bow will come to stbd, port quarter will move in opposition owing to "transverse thrust", "stop engine".
5. Rudder "stbd", engines "a head".

BUNKERING PROCEDURE

Prior taking bunkers:

1. Seal up all deck's scuppers to prevent spillage over side.
2. Establish a second means of access to the vessel incase of emergency.
3. Display appropriate signal "B" flag or all round red light.
4. Post additional "no smoking", signs in deck areas.

5. Establish full fire and spillage precautions close to the manifold and ensure immediate readiness and availability.
6. Have the contact numbers of all the relevant parties ready for use.
7. Set up and test communications between the pumping stations the manifold and the reception personnel monitoring the delivery.
8. Make sure adequate drip trays are positioned under flanges and in the way of the manifold.
9. Rig five wires fore and aft if appropriate. Make fire extension near manifold (foam type)
10. Have dispersal chemical readily available for use on board, the vessel in the event of spillage.
11. Detail sufficient man power on deck and in the engine room to carry out the operation correctly, especially when topping off.
12. Assist engineers in this operation.
13. Make sure if barge along side fender arrangements are okay, their moorings taken care of, their crew not allowed in all anti piracy .

PREPARATION FOR ANCHORING

1. Ensure that every body is with personal protective equipment.
2. Get the right tools for the job.
3. Establish communication with bridge and ask permission to go forward.
4. Obtain power on deck.
5. Check the wind lass brake is fully secured.
6. Clear Hawse pipe.
7. Clear sparling pipe.
8. Clear devil's claw.
9. Unlash cable in chain locker.
10. Remove all pisle cable lashings.

11. Put wind lass into gear.

12. Inform bridge “anchor cleared away”

13. When permission given to “walk back to anchor” check over side of VSL to ensure it is safe to do so.

14. Relax brake and walk out the anchor under power to the required depth.

15. Put the brake back on.

16. Take the wind lass out of gear.

17. Relax brake when ordered to do so.

18. Keep a constant check on the amount of cable being paid out as you will have to ease the break back on to slow down the cables movement. Keep the bridge informed about the amount of cable on deck.

19. Once the anchor is on the seabed then the ship is at anchor and the anchor ball to be displayed.

20. Once the required amount of cable is achieved, put the brake back on fully close the bow stopper and inform bridge .

21. Keep the bridge informed as to how the cable is leading and whether any wt on the cable or if any sign of the cable dragging.

22. Once the anchor is said to be “brought up” again inform bridge.

23. When permission is given to stand down, ensure all FWD is adequately secured then inform the bridge you are standing down FWD and making your way aft.

WEIGHING ANCHOR

1. Ensure that all personnel wearing protective clothing.
2. Get the right tools for the job
3. Establish the communication with bridge and get permission to go Fwd
4. Obtain power on deck and inform bridge that you are standing by Fwd
5. Check windlass brake is on
6. Put windlass into gear
7. Remove Bow stopper / lashings

8. Open hose pipe water (deck water)
9. When ordered to weigh anchor, remove brake and commence heaving.
10. Keep the bridge informed of how the cable in length and amount of cable
11. When the anchor is straight up and down then the anchor has been lifted off the bottom, inform Bridge Anchor Aweigh.
12. Remove anchor ball
13. Continue to heave all the way checking that anchor and cable are not fouled.
14. Inform to bridge anchor sighted and clear
15. Once the anchor is stowed position, then put the brake back on and close the bow stopper
16. Take the windlass out of gear
17. Turn off the power and water

GENERAL ARRANGEMENT PLAN

The general arrangement is presented in the form of Side View and deck by deck plan views. It shows the principal dimensions of the ship. I.e., LOA, LBP, Molded dimensions, summer draft etc., Side Elevation:

1. Rigging
2. Position of tanks, DB, Cargo, Ballast,E/R etc.,
3. Position of fair leads
4. Outside view of accommodation arrangements
5. Frames – numbered along the bottom stating from aft perpendicular
6. Position of Nav Lights, deck flood lights, aerials and Halyards
7. Position of holds, Mast houses etc.,

Plan View: Accommodation, E/R, Main deck …

Static Forces: Occurs due to differences in weight and support in ship.

Dynamic Forces: Wave bending causing alterations in bending of hull. Hogging and Sagging.
Longitudinal Bending: Uneven distribution of loads onboard

Transverse Bending: Forces due to weight of ships structure, fuel, water, cargo

Q: Joining a ship as a 3rd Officer, what are your first actions?

A:

- Look for the Muster List and check for my duties.
- Look for my muster and boat station.
- Familiarise myself with all its content
- Know the location of my LSA and FFA.
- Know the location of my lifejacket, helmet, immersion suit and other clothes required.
- Know the Emergency/Fire Alarm signals.

Q: No cargo operations, what are your duties?

A:

- Ensure continuous gangway watch.
- Make frequent fire patrols.
- Check and ensure security of ship.
- Ensure adequate illumination of ship when necessary.
- Tend moorings as necessary.
- Make note of visitors coming onboard including knowledge of crews onboard/ashore.

Q: Now cargo operations in progress, what are your duties?

A:

- Tend moorings and gangway as necessary.
- Maintain gangway watch.
- Ensure fire precautions in place.
- Prevent boarding of unauthorised persons.
- Keep a record of all operations in Chief Officer log book.
- Ensure adequate lightings of the vessel.
- Ensure cargo plan is adhered to.
- Maintain close monitoring of all operations carried out by crew and ashore personnel.
- Ensure that everything is done in a safe and proper manner.

Q: Master tells you to prepare bridge for sea, what will you do?

A:

- Ensure passage plan is in order with all charts required for the voyage and nautical publications corrected to the latest Notice to Mariners.
- Ensure enough chart equipments (pencils, parallel ruler, divider and compass) are onboard and ready.
- Bridge ancillary equipments (Binoculars, Azimuth Mirror, Aldis Lamp, Pelorus, Sextant, etc) are available and ready.
- Speed/Distance recorder, Echo Sounder, Engine/Bridge movement recorder, are ready and spare papers for printers.
- Gyro compass and all repeaters are synchronised.
- All instruments lightings are alright with spare bulbs available.
- Navigational equipments all set up and ready for use.
- Radar and ARPA made fully operational.
- Both internal and external communication equipments tested and ready for use.
- Telegraph and Steering gear tested and ready.
- Windows cleaned, wipers working satisfactorily.
- Clocks synchronised with the Engine room.
- Current navigational warnings checked and compared with previous warnings.

Q: You are in-charge of Aft mooring station about to sail, what are your duties?

A:

- Check with Master and Pilot anticipated manoeuvre for letting-go.
- Check Bridge-Poop deck communications are satisfactory.
- Remove all rat guards.
- Remove all access, cargo nets, telephone lines, bonding, etc.
- Ensure winches are switched on and running satisfactorily.
- Let go and bring moorings onboard as instructed.
- Keep moorings off propeller and keep the bridge informed of your progress.
- Ship fenders when vessel is clear.
- Check that all ship's equipments are properly stowed and secured.
- After completion, ensure winches are switched off, drains opened and isolated.
- Bring down flags as appropriate.

Q: How do you keep safe navigational watch, (Navigational duties)?

A:

- Maintain proper lookout (Rule 5).
- Check vessel position at regular intervals using various methods of position fixing.
- Display proper Signals.
- Determine compass errors whenever course is altered.
- Check radar and other navigational equipments performance at regular intervals.
- Monitor Navigational warnings closely.
- Adhere strictly to the Rules of the Road.

Q: Fire in galley, what are your actions?

A:

- Raise alarm and inform bridge.
- Bridge should reduce speed if vessel is at sea.
- Close down all means of ventilation.
- Isolate electrical circuits.
- Have fire-fighters wear Fire suits and Breathing Apparatus.
- Have fire-fighters, working in pairs, investigate and tackle fire using fire blanket, dry powder or foam extinguisher.

Q: Fire in accommodation, what are your actions?

A:

- Raise alarm informing Bridge and Master.
- Reduce speed if at sea.
- Close down all mechanical means of ventilation.
- Have fire-fighters wear fire suit and breathing apparatus.
- Isolate live electrical circuits.
- Surround the fire, attacking it from as many angles as possible with hoses.
- Close all fire and water tight doors.
- Place Communicating Officer on standby to transmit emergency or distress signals.
- If traffic and weather will allow, bring the wind to a direction that will minimise the spread of the fire.

Q: Precautions to be observed when handling CO2?

A:

- Beware of suffocation in enclose space.
- Beware of frost-bite.

Q: Which countries use the Region "B" system of buoyage?

A:

- North, South and Central America.
- Philippines
- Japan
- South Korea.

Q: Which vessels should not impede the safe passage of PDV (Power Driven Vessels) in a Traffic Separation Scheme (TSS)? Rule10.

A:

- Sailing Vessels
- Fishing Vessels
- Vessels less than 20 metres in length.

Q: Which vessels should not impede the safe passage of a PDV in a narrow channel? Rule13.

A:

- Crossing vessels
- Sailing vessels
- Fishing vessels
- Vessels less than 20 metres in length

Q: Which vessels must not impede the safe passage of a vessel Constraint By her Draft (CBD)? Rule18.

A:

- All vessels except vessel Not Under Command (NUC) and vessel Restricted in her Ability to Manoeuvre (RAM).

Q: What are the Daily, Weekly and Monthly Tests for GMDSS equipments?

A: **DAILY**:

- DSC; Without radiation, use built-in test facility.
- Batteries; On/Off load voltage check, fully charge if necessary.
- Printers; Check there are sufficient paper for DSC, NAVTEX, TELEX, SATCOM

WEEKLY:

- DSC; Live call to Coast Radio Station on 2187.5 KHz.
- Reserve source of energy, other than battery.
- Survival craft VHF, not on CH.16

MONTHLY:

- *EPIRBS*:
    1. Internal test facility
    2. Battery expiring date
    3. Integrity of hydrostatic release mechanism and replacement date
    4. Planned maintenance schedule; hydrostatic release mechanism, Lanyard.
- *SARTs*:
    1 Test facility with 3cm radar
    2 Battery expiring date
- *All Batteries*:
    1 Check condition with hydrometer where possible
    2 Security and condition
    3 Connections and battery locker integrity

Q: How do you rig Accommodation ladder?

A:

- Wear Personal Protective Equipment (PPE) and take 2 Handy Billys, safety harness and work vest.
- Rig Handy Billys
- Rig wire falls to bridle
- Release lashings
- Ease out accommodation ladder
- Lower to horizontal on Handy Billys
- Take the weight on falls wire and release the Handy Billys
- Send down a man to rig stanchions and hand ropes
- Rig net outboard-side to ship's side
- When alongside, lower accommodation ladder

Q: What is the preparations prior pilot boarding?

A:

- Check the pilot ladder is properly rigged with the steps horizontal
- Check that the bottom step is at the required height above water
- Check manropes are properly rigged
- Check the ladder is flat against ship's side and clear of all overboard discharge
- Stanchions and Bulwark ladder okay
- At night it is properly lit with light shinning away from the bridge
- Ensure satisfactory communication with the bridge
- Lifebuoy with line on standby at boarding station
- Pilot card prepared and ready

Q: What are the publications to be carried onboard?

A:

- International Code of Signals
- MSN, MGN, MIN
- The Mariner's Handbook
- Sailing Directions
- Admiralty List of Lights
- Admiralty List of Radio Signals
- Tide tables, Tide Atlas, Tidal Streams
- Nautical Almanacs
- Nautical (Norie's) tables
- Weekly Notices to Mariners
- Full set of Navigational Charts
- Operational and Maintenance manuals of navigational equipments
- Code of safe working practice for seamen

Additional:

- Copy of Collision regulations (Rules of the Road)
- Guide to port entry
- A copy of chart abbreviations
- Ship's Routeing Chart
- Ocean passages of the world
- Chart Catalogue

Q: Explain the contents of MSN, MGN and MIN.

A:

- **MSN** (Merchant Shipping Notice – **White** in colour): conveys mandatory information which must be complied with under United Kingdom laws. It amplifies statutory instruments.
- **MGN** (Marine Guidance Notes – **Blue** in colour): is issued with regards to topical areas such as MARPOL, SOLAS, etc.
- **MIN** (Marine Information Notes – **Green** in colour): is issued targeting training establishments and equipment manufacturers.

Q: Contents of Weekly Notice to Mariners

A:

- All index of all chart corrections effective in that issue
- Temporary and Preliminary notices
- Corrections to charts
- Corrections to Light lists
- Corrections to Radio Signals
- Corrections to Admiralty Sailing Directions
- Navigational Warnings

Q: What are the things to do before dropping anchor?

A:

- Investigate the charted area to obtain depth of water, nature of the seabed and tidal effects.
- Obtain a current and near-future weather forecast.
- Consider a sheltered anchoring position, preferably in the lee of the land away from where the wind is blowing from.
- The anchorage should not be too close to land.
- Prepare an anchorage approach plan before hand.

Q: How do you prepare anchor for letting-go?

A:

- I will wear my Personal Protective Equipment and carry spike, hammer, grease gun, bucket, torch, ear-muffs and goggles and proceed to fore.
- I will ask for power on deck and at the same time testing communication.
- At fore, I will go into the forepeak store and remove any lashings (if any) on the anchor and engage power.
- On forecastle deck, ensuring that the windlass is out of gear, I will switch on the power, warm it and at the same time, grease round with grease gun.
- I will put into gear, release brake, and small movement of the cable is enough to break the cement pudding. Remove cover and stowaway.
- I will go forward and remove hawse-pipe cover, guillotine bar on bow stopper, and devil's claw.
- I will inform Bridge and request permission to work out anchor.
- I will look over the side and walk out anchor to just above water and bring home, leaving it just outside the hawse-pipe.
- I will apply brake, take out of gear, tighten the brake and inform the bridge that anchor is ready.

Q: What are the duties of OOW on anchor watch?

A:

- Ensure vessel is not dragging anchor by taking regular fixes using various methods of position fixing.
- Know the position of the anchor (mark position with a buoy; obtain a fix immediately anchor is dropped).
- Abide by Master's Bridge Orders.
- Keep a log of weather, noting any unexpected changes and inform master if necessary.
- Ensure correct Navigational lights/shapes are displayed.
- Ensure a proper lookout is maintained so that correct sound signal maybe sounded if close-quarters situation develops
- Know the time of tide change, thus when the vessel will be swinging.
- Keep a good radio watch.
- Inform Master if in doubt.

Q: At anchor, what are your actions if you see another vessel dragging anchor towards you?

A:

- Standby Main Engines.
- Order anchor party to standby fore.
- Sound five (5) short and rapid blasts on the whistle.
- Inform Master of the situation immediately.
- Attract attention of the vessel by calling her on the VHF or use Aldis Lamp.
- Standby to: - Pay out more cable,
  - Heave away on the cable to move the vessel forward,
  - Go ahead on engines and stream over your own cable, or
  - Provide the vessel with a sheer by a hard-over action of the rudder.

Q: What are your actions on sighting a vessel aground right ahead?

A:

- Stop and take all way off vessel.
- Inform Master immediately.
- Operate echo-sounder.
- Plot positions of both vessels.
- Call up the vessel aground and ascertain her draught and the time aground (for tide purposes)
- Make a full appraisal of the situation and navigate with extreme caution.

Q: What are the contents of IMDG (International Maritime Dangerous Goods) Code?

A:

There are 3 volumes.

- Volume 1: Definitions, Classification, Packing instructions, Tank provisions as per Transport operations
- Volume 2: Dangerous goods list; UN number, Proper shipping name, Class, Packing group, Packing instruction, IBC Packing instruction, IMO Tank instruction, UN Tank instruction, and EmS number.
- Volume 3: Emergency procedures, MFAG.

Q: What are the classes of Dangerous Goods?

A:

- Class 1: Explosives
- Class 2: Gases Compressed, Liquefied, or Dissolved under pressure
- Class 3: Flammable Liquids
- Class 4: Flammable Solids
- Class 5: Oxidising Substances
- Class 6: Poisonous (Toxic) Substances
- Class 7: Radioactive Substances
- Class 8: Corrosives
- Class 9: Miscellaneous dangerous substances which posed a danger not covered by other classes.

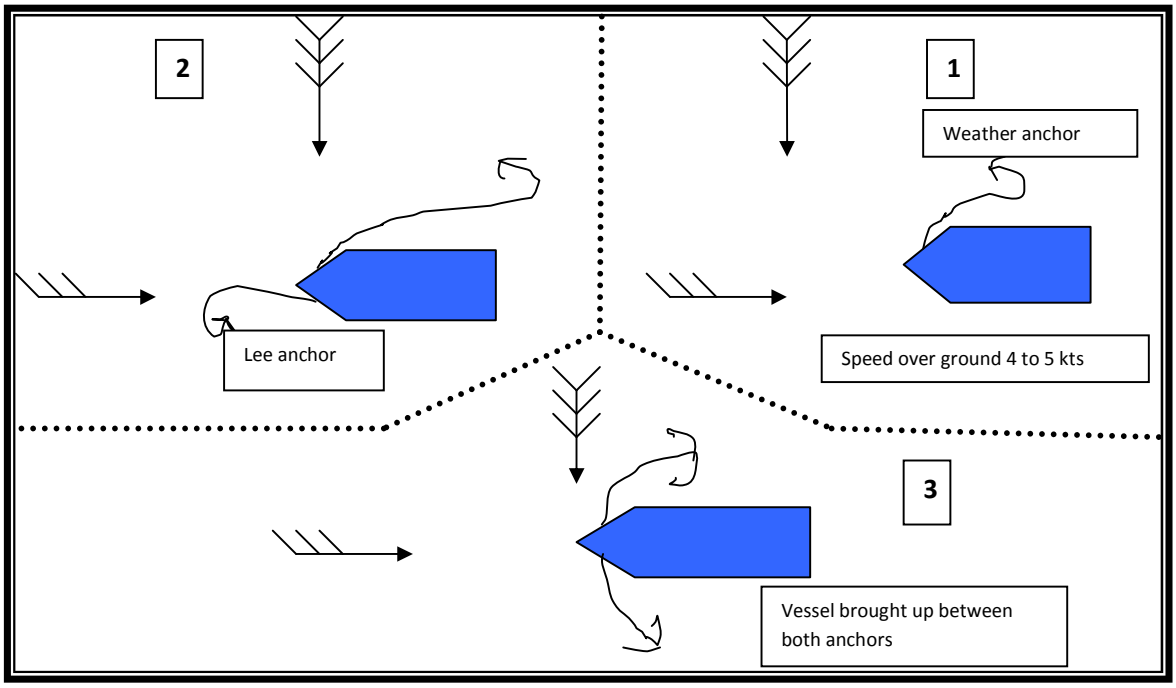
Q: How will you turn a vessel short round?

A:

- Start the manoeuvre from the port side of the channel (if the vessel has right-handed propeller, she will turn easily to starboard) to provide maximum head reach of the vessel.
- Rudder hard-a-starboard and full ahead on main engines.
- Stop engines to prevent the vessel from gathering too much headway
- Put rudder amidships and main engines full astern
- As sternway is gathered, the bow of the vessel will cant to starboard while the port quarter will move in opposite direction due to transverse thrust. Stop engines.
- Put rudder to starboard and engines ahead and manoeuvre as essential.

Q: How will you carry out Running Moor?

A:



- Pay out Weather anchor heading into tide
- Continue to pay out up to 8 or 9 shackles depending on depth of the water and amount of cables carried onboard. The vessel will over run the desired mooring position. Stop engines.
- The vessel will start going astern. Let go the Lee anchor and pay out the cables. Start heaving on the weather anchor to bring the vessel up between the two anchors.

Q: How will you carry out Standing Moor?

A:

- In this case, the vessel is heading into tide and stopped over ground. Sternway is gathered by tide or operating astern propulsion.
- Let go lee anchor (riding cable and allow the vessel to drop astern).
- When sternway is gathered, pay out more cable up to 8 or 9 shackles.
- Take sternway off the vessel while checking on the weight of the cable.
- Order maximum helm away from the release anchor, and use engines to cant the vessel before letting go the weather anchor.
- Use engines ahead or astern to ease weight on windlass as vessel heaves on the lee anchor.
- Continue to heave on the lee anchor while paying out on the weather anchor until the vessel is brought up between the anchors.

Q: Your Magnetic Compass change from 353º to 020º but Gyro Compass remains the same, why?

A:

- This is due to magnetic ores on or just below the seabed giving rise to local magnetic anomalies, causing temporary deflection of compass.
- The areas of disturbance are usually small unless there are many anomalies close together.
- Amount of deflection depends on the depth of water and strength of magnetic force generated by the magnetic ores.
- Not much effect is felt in water of depth greater than 1500 metres.
- Similarly, a ship would have to be within 8 cables of a nearby land mass containing magnetic ores for deflection to occur.
- Deflection may be caused by wrecks lying underneath in moderate depths but, defection will not exceed 7º and not more than 250 metres.
- It may also occur when in close quarters situation with ship carrying a large quantity of iron ore.

Q: What is the minimum distance you will pass an isolated danger buoy and why?

A:

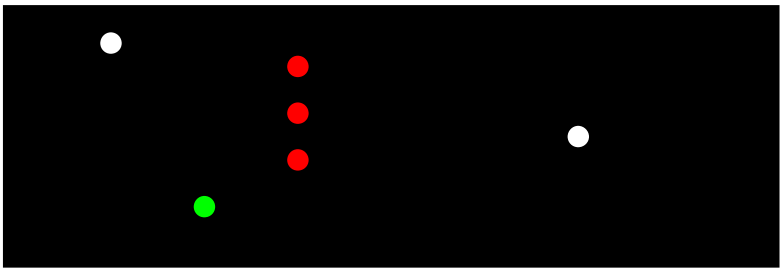
- The minimum distance is 500 metres.
- This is because Offshore industry set up 500 metres as the minimum distance to pass Offshore installations, thus the maritime industry complied as well for uniformity purpose.

Q: You see a power driven vessel at 4 points on port bow with range of 8 nautical miles, what are your actions?

A:

- Take series of compass bearing.
- If bearing remains steady with range decreasing, sound 5 short and rapid blasts on whistle (Rule 34).
- Supplement with 5 short flashes.
- Man on wheel.
- Inform Master.
- Engines on standby.
- Check my navigational lights.
- If bearing is still steady with range reducing, sound one short blast and alter course to starboard and parallel her course. Monitor the situation and decide on the best course of action to take (Rule 34, 8d).

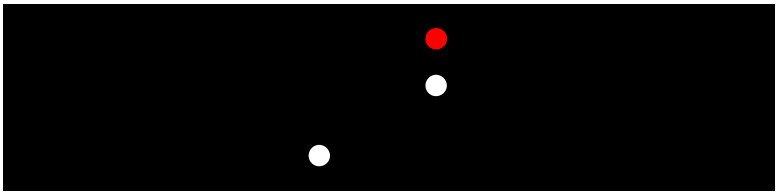
Q: Fully identify the vessel and explain what action to take.



A:

- It is a vessel ***constraint by her draught (CBD)***, probably 50 or more metres in length and seen from starboard side, making way through the water. Day signal is a ***black cylinder*** displayed where it can best be seen (Rule 28).
- I am required not to impede her safe passage (Rule 18di); I will reduce my speed and allow her to pass ahead, will monitor the situation until she is finally passed and clear.
- Fog signal is ***one prolonged blast followed by two short blasts*** at intervals not exceeding 2 minutes (Rule 35c).

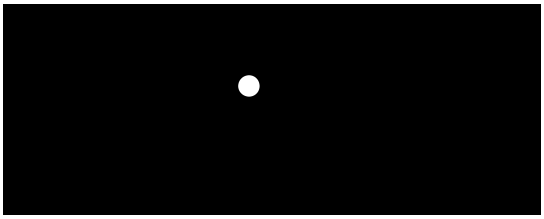
Q: Fully identify this vessel and explain what action to take.



A:

- A ***vessel engaged in fishing other than trawling*** seen from astern with gear extending more than 150 metres in length and making way, OR
- A ***vessel engaged in fishing other than trawling*** with gear extending more than 150 metres in length underway but not making way, OR
- A ***vessel engaged in fishing other than trawling*** with gear extending more than 150 metres at anchor (fishing vessels don't display anchor light).
- Day signal is ***2 black cones*** with apexes pointing together in a vertical line where it can best be seen and ***another black cone*** pointing upwards in the direction of the gear (Rule 26c).
- Fog signal is ***one prolonged blast followed by two short blasts*** at interval not exceeding 2 minutes (Rule 35c,d)

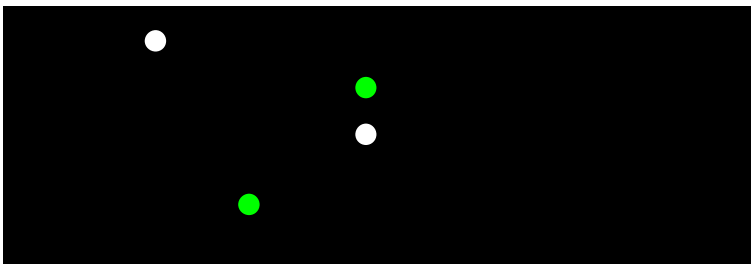
Q: Identify this vessel.



A:

- A power driven vessel seen from astern underway (Rule 23a iv), OR
- A power driven vessel with length less than 7 metres and speed not exceeding 7 knots (Rule 23c ii), OR
- A life raft, OR
- A vessel under oars (Rule 25d ii), OR
- A vessel less than 50 metres in length out of range of side lights, (Rules 22, 23a ii), OR
- Shore object.

Q: Fully identify this vessel and explain what action you will take.



A:

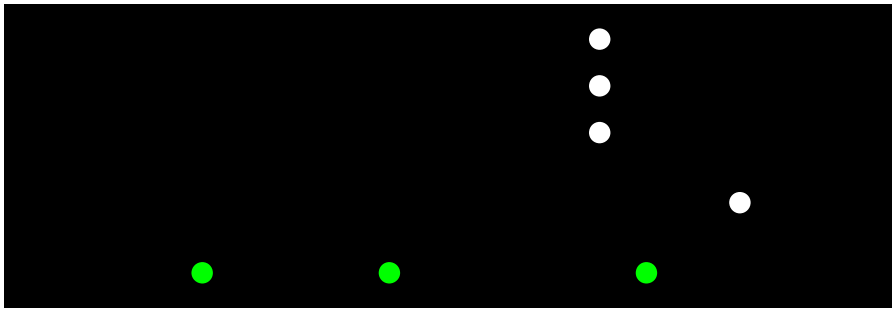
- A ***vessel engaged in trawling*** probably 50 or more metres in length seen from starboard side under way and making way (Rule 26b).
- I will take series of compass bearing.
- If bearing remains steady, I will sound one short blast and alter course to starboard and pass well clear of her bow. And will monitor the situation until she is finally passed and clear.
- Fog signal is **one prolonged blasts followed by two short blasts** at intervals not exceeding 2 minutes.

Q: You see the Trawler described above 4 points on your port bow with range of 6 nautical miles in a TSS, what are your actions?

A:

- I will take series of compass bearing to ascertain if risk of collision exists.
- If bearing is steady and range is decreasing, I will sound 5 shorts and rapid blasts on the whistle,
- Supplement with 5 short flashes,
- Inform Master,
- Man on wheel,
- Standby engines,
- Check my navigational lights,
- If bearing remains steady and range is decreasing, I will reduce my speed and allow her to pass ahead of me and report her to appropriate authority.

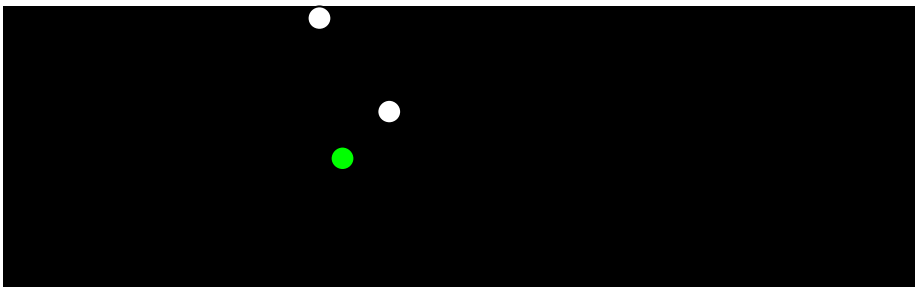
Q: Fully identify this vessel and explain what action you will take.



A:

- She is a ***towing vessel*** probably 50 or more metres in length seen from starboard side underway with length of tow exceeding 200 metres. She is towing two vessels (Rule 24).
- I will take series of compass bearings of the tug and the last towed vessel to ascertain if risk of collision exists.
- If bearing remains steady, I will maintain my course with caution. This is because she is not restricted in her ability to manoeuvre and therefore remains the give-way vessel.
- Day signals are a ***black diamond*** displayed where it can best be seen on both the tug and each of the towed vessels.
- Fog signals are ***one prolonged followed by two short blasts*** at intervals not exceeding 2 minutes on the whistle by the tug. If the last vessel towed is manned, she will sound ***one prolonged followed by three short blasts*** at intervals not exceeding 2 minutes.

Q: Fully identify this vessel and explain the actions you will take.



A:

- She is a ***power driven vessel (PDV)*** probably 50 or more metres in length seen from starboard side underway.
- I will take series of compass bearing to ascertain if risk of collision exists.
- I expect bearing to open up gradually to starboard.
- If I anticipate any close-quarters situation, I will sound one short blast and alter course to port to increase the Closest Point of Approach (CPA).

Q: You sight a mine clearance vessel ahead; what are your actions?

A:

- Alter course to starboard making CPA of at least 1000 metres (Rule 27f),
- Stop and take all way off the vessel,
- Contact the vessel with positive identity and take information as per the exercise,
- Inform Master,
- Start Engines and pass well clear as per instructions from the vessel.

RESTRICTED VISIBILITY

Note: In all cases you are a power driven vessel underway. Also, there is no stand-on vessel; every vessel is a give-way vessel (Rule 19).

Q: What actions will you take on approaching a fog bank?

A:

- Place main engines on standby
- Reduce vessel speed to safe speed
- Place lookouts and make radar fully operational with systematic plotting of targets in the vicinity
- Start sounding appropriate fog signal before entering the fog bank
- Inform Master
- Ascertain the position of vessel (if possible) before entering the fog bank.
- Stop all noisy work on deck.

Q: You hear a fog signal about 3 points on port bow, what are your actions?

A:

- Stop and take all way off vessel
- Double lookouts
- Change fog signal
- Increase frequency of sounding fog signal
- Adjust radar ranges to detect appropriate object
- Listen to the signal made by the other vessel

Q: You see a target 1 point abaft starboard beam range 8 nautical miles, what are your actions?

A:

- Commence, continue and complete plotting of the target to determine her course, speed, CPA, TCPA, BCPA and aspect.
- By now the range may be less than 8 nautical miles thus, Stop and take all way off the vessel,
- Change fog signal from that of a vessel making way to that of a vessel stopped and not making way,
- Sound it more frequently,
- Inform Master,
- Double lookout,
- Keep a good listening for fog signal,
- Keep plotting until she's finally passed and clear.

Q: You see target on port bow, then you hear fog signal 4 points on starboard bow, what are your actions?

A:

- Stop and take all way off your vessel,
- Change fog signal,
- Inform Master,
- Double lookout,
- Sound fog signal more frequently,
- Maintain good listening for fog signal,
- Bring down radar range to try and pick the target on starboard bow,
- Keep plotting the other vessel until she is finally passed and clear.

Q: You see target astern on a steady bearing, what are your actions?

A:

- Commence, continue and complete plotting to determine the course, speed, CPA, TCPA, BCPA and aspect of the target,
- I will alter course to port because I will normally expect her to alter course to starboard,
- I will also keep my starboard side clear.

Q: After plotting a target 4 points on your starboard bow; you find out that the CPA is 1 nautical mile on your bow, what are your actions?

A:

- Alter course 45º to starboard and continue plotting until the target is finally passed and clear.

Q: Target on a reciprocal course; what are your actions?

A:

- Commence, continue and complete plotting to determine course, speed, CPA, TCPA, BCPA and aspect,
- Alter course to starboard and continue plotting until she is finally passed and clear.

Q: Two targets 4 points on both bow; what are your actions?

A:

- Commence, continue and complete plotting of both targets to determine their courses, speeds, CPA, TCPA, BCPA and aspects,
- Alter course to starboard and keep plotting until both targets have finally passed and clear.

Q: After plotting, you determined that the CPA of a target on your starboard bow is zero; what are your actions?

A:

- Alter course 60º to starboard and continue plotting until the target is finally passed and clear.

Q: After plotting, you determined the CPA of a target on your starboard bow is 1 nautical mile at your stern; what are your actions?

A:

- Alter course 90º to starboard and continue plotting until the target is finally passed and clear.

Q: After plotting two targets; one 4 points starboard bow and the other 2 points abaft starboard beam, you determined that their CPA is respectively zero and 0.5 nautical miles astern; what are your actions?

A:

- Stop and take all way off the vessel,
- Change fog signal,
- Sound it more frequently,
- Inform Master,
- Double lookout,
- Maintain good listening for fog signals,
- Keep plotting until both vessels are finally passed and clear.

PS:

The above questions and answers are only aids to preparation for MCA OOW orals. The whole document is not all inclusive thus reference should be made to other texts. I personally recommend “Seamanship Techniques” by D.J. House. It should be an inseparable companion of all deck officers.

These notes were made from classroom lectures delivered by Captain Finch of Fleetwood Nautical College, England, United Kingdom, and notes from colleagues who attended and passed MCA OOW Orals.