



# Indian Register of Shipping

## Report of HSC Safety Survey

### Periodical / Annual Survey Checklist

Name of ship: .....

I. R. No.: .....

Port of Survey: .....

Report No.: .....

Use “Y” for satisfactory; “N” for not satisfactory/see recommendation in continuation sheet; “-” for not applicable.

**NOTES:**

1	“Code” in this report refers to “International Code of Safety for High-Speed Craft”
2	Please refer relevant administration circulars (D.13) for flag specific requirements
3	Ships may be fitted with equipment over and above the requirement. Same is to be maintained and included in report

**1. GENERAL**

1.1	Confirmation that craft is in possession of following certificates/documents (as applicable based on size/type of craft): (i) Certificate of Registry (ii) International Tonnage Certificate (iii) Minimum Safe Manning Document (iv) Valid radio license issued by flag administration (v) Safety Management Certificate (vi) Copy of Document of Compliance issued to the Company (vii) ISPS Certificate, Continuous Synopsis Record, Ships Security Plan (viii) International Load Line Exemption Certificate (ix) IOPP certificate, Oil Record Book, Shipboard Oil Pollution Emergency Plan (craft above 400GT) (x) ISPP Certificate (xi) IAPP Certificate, EIAPP Certificates for engines, NOx technical File (xii) International Energy Efficiency Certificate (xiii) International Anti-Fouling System Certificate (xiv) Garbage Record Book, Garbage Management Plan (crafts above 400GT) (xv) Search & Rescue co-operation plan (Passenger Crafts) (xvi) STCW certificates for Master, officers and ratings. Certificate for GMDSS operators	.....
1.2	Craft is in possession of a valid permit to operate?	.....
1.3	Master and crew in possession of valid STCW certificates and type rating certificates?	.....
1.4	Confirmation that manning of the craft meets the min safe manning requirements.	.....
1.5	Confirmation that approved technical manuals (Route operating manual, Craft operating manual, Training Manual, Maintenance Manual and Servicing Schedule) are available on board.	.....
1.6	Verification that following information is available in Craft Operating Manual. (i) Evacuation procedure (ii) any limitation on the operation of the craft (as may be necessary to ensure that the redundancy or safeguards in the systems provide equivalent safety) (iii) max permissible speed at which the craft may be towed (iv) information on controllability and maneuverability (v) instructions regarding craft limitations and required actions subsequent to prescribed failures (vi) Critical speed range for engines	.....

1.7	Fire control Plans (including duplicate set permanently stored in a prominently marked weather tight enclosure outside the deck house) properly posted. FCP Plan Approved by.....on .....	.....
1.8	Practice Musters and Drills. (It is also confirmed that the person in charge of survival craft and in the case of lifeboats the second in-command have a list of the survival craft crew) LSA Plan Approved by.....on.....	.....
1.9	Confirmation that information on change in craft behavior during transition from one type of operating surface or mode to another and craft operating limitations due to surface irregularities is available to the Master.	.....
1.10	Confirmation that clear instructions to be followed in the event of an emergency is provided for each person on board.	.....
1.11	Confirmation that illustrations and instructions in appropriate languages are posted in public spaces and conspicuously displayed at assembly stations, at other passenger spaces and near each seat to inform passengers of their assembly station, the essential actions they must take in an emergency and the method of donning lifejackets.	.....
1.12	Confirmation that muster lists are exhibited in conspicuous places throughout the craft including the control compartment, engine-room and crew accommodation spaces	.....

## 2. BUOYANCY, STABILITY AND SUBDIVISION

2.1	Date of last inclining/lightweight survey.....	.....
2.2	Loadline permanently marked on craft sides verified?	.....
2.3	Draught-indicating system if fitted verified for correct functioning?	.....
2.4	Examination and test of watertight doors incl. local and remote operation, indicators for close/open position, audio/visual alarm during door operation, provision of power in case of main power failure.	.....
2.5	Verification of watertight integrity of all bulkhead penetrations.	.....
2.6	Shell doors, loading doors, inner bow doors, vehicle ramps and other closing appliances where provided (for ro-ro crafts).	.....
2.6.1	Examination of shell doors, loading doors, inner bow doors, vehicle ramps and other closing appliances	.....
2.6.2	Verification of weather tightness of the shell doors, loading doors, inner bow doors, vehicle ramps and other closing appliances where provided.	.....
2.6.3	Test of indicator and alarm system, power supply for the indicator/alarm system are independent of the power supply for the door operation.	.....
2.6.4	Verification of television surveillance and water leakage detection system.	.....
2.7	Verification of closing arrangement and weather tightness of all accesses leading below deck in the ro-ro spaces, all accesses and for vehicle ramps if installed. Provision of alarm indicator for these closing arrangements. Verification of television surveillance arrangement for special category spaces and ro-ro spaces if provided.	.....
2.8	Verification of doors, windows and other openings in boundaries of weather tight spaces/superstructures for weather tightness.	.....
2.9	Verification of the means of securing weather tightness of cargo/other hatchways, machinery space openings, miscellaneous openings, air pipes and ventilators in exposed decks.	.....
2.10	Verification of scuppers, sanitary discharges together with valves and their control gear	.....
2.11	Verification of the monitoring program for buoyancy medium (e.g. foam etc.), as applicable	.....

## 3. STRUCTURES

3.1	Confirmation that no unauthorized alteration, modification done to original as-built arrangement	.....
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#### 4. ACCOMMODATION AND ESCAPE MEASURES

4.1	Verification of general arrangement, fire control and evacuation arrangement incl. protection of the passengers and crew during normal and emergency conditions	.....
4.2	Verification that escape routes are satisfactory and with no obstructions. Notices/directions are posted to direct passengers to emergency exits (evacuation stations and safe areas). Closing, latching and locking of exit doors is readily apparent to crew.	.....
4.3	Verification of seating arrangement for crew and confirmation that the safety belts for passenger as well as crew seats are in order.	.....
4.4	Verification of handholds at embarkation stations, anti-skid treatment of the embarkation deck, guardrails or bulwarks fitted on all exposed parts of decks to which crew or passengers have access	.....
4.5	Verification of the spaces accessible to passengers, that the arrangement of operating controls, electrical equipment, high-temperature parts and pipelines, rotating assemblies or other items if fitted are adequately shielded, isolated, or otherwise protected.	.....
4.6	Verification & test of that the general emergency alarm and public address system to confirm that these are operational and audible in all passenger, crew areas, escape routes and embarkation station, as applicable.	.....
4.7	Verification of illuminated or luminous notices or video information system(s) visible to all sitting passengers, in order to notify them of safety measures are in satisfactory condition. Verification of any visual information system available to master is in order.	.....
4.8	Confirmation that public spaces, evacuation routes, exits, lifejacket stowage, survival craft stowage, and the embarkation stations are clearly and permanently marked and illuminated. Clear markings <sup>3</sup> , including the location of the fire control plan, is provided for the guidance of rescue personnel outside the craft.	.....
4.9	Verification of means of escape from main propulsion machinery spaces and ro-ro spaces.	.....
4.10	Verification that arrangement for storage of baggage, store and cargo including arrangement for preventing shifting during voyage and falling from the overhead shelves are in order. Loading limits are durably marked in the compartments and closures of exterior openings are weather tight.	.....
4.11	Verification of noise level in public spaces, crew accommodation and operating compartments. {Noise level in public spaces and accommodation shall not exceed 75dB(A) and in operating compartments shall not exceed 65dB(A)}	.....

#### 5. DIRECTIONAL CONTROL SYSTEM

5.1	Verification and test of direction control system to confirm it is in efficient condition especially with regard to the provision of back up electrical system, automatic operation in case of a power failure, provision of secondary means of actuation and single failure criteria. Confirmation that directional control can be accomplished without undue physical effort	.....
5.2	Where directional control systems can also be operated from other positions, verification of two-way communication between the operating station and these other positions. Verification of indications at the operating station and other positions to provide the person controlling the craft with verification of the correct response of the directional control device to the demand, and indication for any abnormal responses or malfunction.	.....

#### 6. ANCHORING, TOWING AND BERTHING

6.1	Verification of attachment of anchoring equipment, towing bits, mooring bollards, fairleads, cleats and eyebolts are satisfactory.	.....
6.2	Verification of enclosed space containing the anchor-recovery equipment to ensure that persons using the equipment are not put at risk with particular attention to the means of access to such spaces, the walkways, the illumination and protection from the cable and the recovery machinery.	.....
6.3	Verification and test of two-way voice communication between the operating compartment and persons engaged in dropping, weighing or releasing the anchor.	.....
6.4	Verification that adequate mooring ropes are provided.	.....
6.5	Verification of operational test of anchoring equipment, as applicable	.....

## 7. FIRE SAFETY

7.1	Confirmation that notices/instructions available forbidding passengers to any special category spaces, cargo spaces and open ro-ro spaces during the voyage.	.....
7.2	Verification that material for any thermal & acoustic insulation, deck finish material, exposed surfaces in corridors, stairway enclosures and bulkhead, ceilings/linings including furniture and furnishings etc. where repairs/renewals have been affected meet the requirement of the Code.	.....
7.3	For crafts using fuel oil with flash point below 43deg C (use of fuel with flash point below 35deg C is not allowed), examination and test of fixed vapour-detection system.	.....
7.4	For crafts using fuel oil with flash point below 43deg C, confirmation that electrical equipment in spaces where fuel leakage can occur are of "safe type".	.....
7.5	Test of manual and remote shutting of dampers and ventilation fans.	.....
7.6	Verification that the weather tightness of ventilators. Confirmation that ventilation system main inlet/outlets and ventilation fans are capable of being operated from outside the spaces being ventilated, controls of ventilators are prominently and permanently marked to indicate shut-off is open or closed. For areas of major fire hazard these are capable of being operated from a control station.	.....
7.7	Test of main and emgy fire pumps.	.....
7.8	Where deep-fat cooking equipment is installed, verification of the arrangement to confirm same meets the requirements of the Code.	.....
7.9	<b>EXTINGUISHERS AND FOAM APPLICATORS</b>	
7.9.1	All extinguishers and foam applicator unit was fully charged and in their stowed position	.....
7.9.2	Date when charged: Extinguishers ..... Applicator Units .....	
7.9.3	Date extinguishers pressure tested: .....	
7.9.4	Spare charge for each extinguisher other than for gas cylinder was provided.	.....
7.9.5	Spare gas cylinders provided (spare cylinders 100%)	.....
7.9.6	All extinguishers in their stowed positions and a random check revealed no discharged containers	.....
7.10	Verification that the exhaust ducts from galley ranges are provided with grease trap and fire dampers, a fixed means of extinguishing fire within the duct, remote control for shutting off the exhaust/supply fans and arrangement for inspection and cleaning.	.....
7.11	For ventilation ducts passing through a fire resisting division, verification of failsafe automatic closing fire damper adjacent to the division.	.....
7.12	<b>FIXED FIRE/SMOKE DETECTION AND FIRE ALARM SYSTEMS</b>	
7.12.1	Verification and test of fixed fire/smoke detection and alarm system	.....
7.12.2	Verification that an audible alarm was activated automatically if visual and audible signal at fire control panel(s) not responded to within two minutes	.....
7.12.3	Verification that two sources of power supply is available for these system and power supplies and electric circuits for the system is monitored for loss of power or fault condition and initiate visual and audible fault signals at the control panel.	.....
7.12.4	Verification that clear information is displayed on or adjacent to each indicating unit about the spaces covered and the location of the sections. Suitable instructions and component spares for testing and maintenance is provided.	.....
7.13	<b>FIXED FIRE EXTINGUISHING SYSTEM</b>	
7.13.1	LOCATION	INDICATE TYPE OF SYSTEM FITTED
	Engine room	
	Boiler room	
	Pump room	
	Dry cargo spaces	
	Accommodation spaces	
	Cargo tanks	
	Galley exhaust ducts	
	Paint locker	
	Other spaces as on record	

7.13.2	<b>CO<sub>2</sub> SYSTEM</b>	
	Date container(s) content verified .....	
	Date container(s) pressure tested .....	
	Date system last serviced .....	
	5y'ly ..... 10y'ly ..... 15y'ly .....	
	(Dates as applicable)	
	System examined and tested as far as practicable and found satisfactory	.....
7.13.3	<b>HALON SYSTEMS</b>	
	Date container(s) content verified .....	
	Date container(s) pressure tested .....	
	Date system last serviced .....	
	Systems examined and tested as far as practicable and found satisfactory	.....
7.13.4	<b>FOAM SYSTEMS</b>	
	Date foam: supplied to ship ..... sample tested .....	
	(Sample test required after 3 years of supply and subsequently every year)	
	System(s) examined and tested as far as possible and found satisfactory	.....
7.13.5	<b>FIXED WATER SPRAYING SYSTEMS</b>	
	System(s) examined and tested as far as practicable and found satisfactory	.....
7.13.6	<b>FIXED LOCAL APPLICATION FIRE-EXTINGUISHING SYSTEMS</b>	
	Fixed Local Application fire-extinguishing system in satisfactory condition	.....
7.13.7	<b>SPRINKLER SYSTEM(S)</b>	
	System(s) examined and tested as far as practicable and found satisfactory	.....
	Visual and Audible alarm was automatically activated whenever system(s) operate(s)	.....
7.13.8	<b>DRY POWDER SYSTEM(S)</b>	
	System(s) examined and tested as far as practicable and found satisfactory	.....
7.14	Verification that each fire pump including the emergency fire pump (including starting and priming arrangements) can be operated separately and is capable of producing the required two jets of water simultaneously. Verification to ensure proper maintenance, inspection and testing has been done.	.....
7.15	Verification that fire main (no soft patches or doublers and no leaks on piping when operationally tested to working pressure) together with flanges and valves, hydrants, hoses, nozzles, applicators, spanners and relief valves are maintained in good working condition and situated at their respective locations. Verification of satisfactory operation of all isolation valves incl. identification.	.....
7.16	For vessels fitted with deep fat cooking equipment, Checking for evidence of proper maintenance, testing and inspection. Verification that instructions, notices and markings are posted. Verification that arrangements are in good order and maintained ready for use.	.....
7.17	For cargo craft verification that control stations, life saving appliance stowage positions, escape routes and places of embarkation into the survival craft are in order. Verification that cargo spaces (except open deck areas or refrigerated holds) automatic smoke detection system and fixed quick acting fire extinguishing system are in satisfactory condition. For crew accommodation (more than 50m <sup>2</sup> deck area), verification of fixed sprinkler system for satisfactory condition. Confirmation that plan of the fixed sprinkler system is displayed at each operating station. Verification of the drainage arrangement.	.....
7.18	<b>FIRE FIGHTER'S OUTFIT</b>	
7.18.1	Each unit complete and in good condition	.....
7.18.2	Each outfit complete with air cylinders, including spare cylinders fully charged (2Nos spare cylinders for each outfit set)	.....
7.18.3	Hydraulic pressure testing of SCBA cylinders last carried out on (every 5 years) -----	.....
7.18.4	Breathing air compressor/ self-contained high-pressure storage system operating satisfactorily (required for cargo ships if carrying only 1 spare bottle for each SCBA)	.....
7.18.5	Vessel fitted with a suitably located means for fully recharging breathing air cylinders free from contamination (mandatory for passenger ships carrying more than 36 passengers and constructed on or after 1 July 2010)	.....
7.18.6	Smoke mask, air pump and hose tested and found satisfactory	.....

7.19	<b>SHIPS ENGAGED IN THE CARRIAGE OF DANGEROUS GOODS</b>	
7.19.1	The special arrangements and equipment as per the Record attached to the Document of Compliance (if applicable), in good condition and operating satisfactorily	.....

**8. LIFE-SAVING APPLIANCES AND ARRANGEMENTS**

8.1	Confirmation that posters or signs are provided on or in the vicinity of survival craft and their launching controls illustrating purpose of controls and procedures for operating the appliance and give relevant instructions and warnings using recommended symbols.			.....
8.2	Confirmation that containers, brackets, racks and other similar stowage locations for life-saving equipment, are marked with required symbols, indicating the devices stowed in that location for that purpose. If more than one device is stowed in that location, the number of devices also is indicated.			.....
8.3	Confirmation that spares and repair equipment are provided for life-saving appliances and their components which are subject to excessive wear or consumption.			.....
8.4	Verification of designated helicopter pick-up area (required for voyages having duration of 2hrs or more)			.....
8.5	Date of last crew muster and fire and boat drills (which should include inspection of those items of operating equipment included in the check list as contained in the instructions, or on-board maintenance) (Required monthly) .....			
8.6	Date of visual inspection of survival craft, rescue boats, launching appliances, testing of lifeboat and rescue boats engine, and testing of the general alarm system (Required weekly) .....			
8.7	Boat equipment examined and found to be complete. (It is to be further confirmed that monthly inspections of all survival craft and rescue boats including engines and launching appliances plus the general alarm system are being carried out and logged )			.....
		BOAT	RENEWED	REVERSED
		1		
		2		
		3		
		4		
8.9	Date Rescue boat falls last renewed ..... / reversed .....			
8.9.1	Date falls renewed for 2 <sup>nd</sup> Rescue boat (required for passenger ships above 500 GT) renewed ...../ reversed .....			
		RAFT	DATE RENEWED	DATE REVERSED
		1		
		2		
		3		
		4		
8.11	Record of periodical inspection of lifeboat falls maintained.			.....
	Last occasion davit launched lifeboats moved from stowed position/ turned out/ launched and manoeuvred (See note 2)			
	Boat	Moved from stowed position (Weekly) (Only for cargo ships)	Turned out (Monthly)	Launched and maneuvered in water (3 monthly)
	1			
	2			
	3			
	4			
8.11.2	Last occasion rescue boat was launched and manoeuvred. (Required monthly where practicable; but interval not to exceed 3 months) .....			
8.11.3	Date 2 <sup>nd</sup> Rescue boat was launched and manoeuvred .....			

8.12	Marine Evacuation System (if provided on ro-ro passenger ships/ passenger ships) last deployed							
	MES	Test Deployment (at least 50% after installation and remaining within 12 months)				Each every 6 years		
	1							
	2							
8.13	Servicing of Inflatable Life rafts, Hydrostatic release unit, inflatable life jackets and marine evacuation system:							
8.13.1	<b>Liferafts and HRU</b> (Include in the table details of any life raft stowed forward or aft)							
Sr. no.	Makers Name & Serial Number of Liferaft	No. of Persons	Date Serviced	Date Service Due	Location	Servicing Agent	Date HRU Serviced	HRU Expiry / Next Servicing Due
i								
ii								
iii								
iv								
v								
8.13.2	Servicing of inflatable lifejackets carried out on .....							
8.13.3	Servicing of Marine Evacuation System carried out on ...../..... Provide different dates if required.							
8.14	For Davit launched lifeboats/ liferafts:							
8.14.1	Annual thorough examination of launching appliances carried out on .....							
8.14.2	Dynamic test of winch brake of launching appliances carried out: Annual on ..... 5 yearly on .....							
8.14.3	Lifeboat on load release gear thorough examination and operational test carried out: Annual on ..... 5 yearly on: .....							
8.14.4	Thorough examination and operational test of davit launched life rafts automatic release hooks carried out: Annual on ....., 5 yearly on .....							
8.15	For free fall lifeboats:							
8.15.1	Thorough examination and operational test of release system carried out: Annual on ..... 5 yearly on .....							
8.16	Dedicated Rescue Boats							
8.16.1	Date of last service of rescue boat .....							
8.16.2	Dynamic Test of Launching Appliances winch brake last carried out on .....							
8.17	Hydraulic pressure testing of cylinders of lifeboat air support system, where provided ..... (Required every 5 years)							
8.18	Instructions for on board maintenance of Life Saving appliances – easily understood and illustrated wherever possible							.....
8.19	<b>NAVIGATION LIGHTS</b>							
8.19.1	LSS Plan (Indian flagged vessels) Approved by ..... on .....							
8.19.2	Sidelight inboard screens painted matt black							.....
8.19.3	Navigation lights in good condition and operating satisfactorily							.....
8.19.4	Navigation light failure warning device: Visual/Audible on bridges operating efficiently							.....
8.20	<b>BRIDGE DISTRESS SIGNALS</b>							
	Indicate expiry date (E) or manufacture date (M) of the following							
					E/M		DATE	
8.20.1	12 Red parachute signals							
8.20.2	Line throwing rockets, and							
8.20.3	Igniter cartridges (if applicable)							
8.20.4	Line throwing rockets and ship's distress flares in good condition							.....

8.21	<b>SURVIVAL CRAFT, RESCUE BOAT AND ASSOCIATED LAUNCHING, AND RECOVERY APPLIANCES</b>								
8.21.1	Lifeboats turned out and lowered to Embarkation Deck, at time of Survey, OR (circle number as appropriate)	1	2	3	4				
8.21.2	Life boats turned out, lowered and maneuvered in water (Circle number as appropriate)	1	2	3	4				
8.21.3	Each motor lifeboat engine readily started and operated satisfactorily, ahead and astern								.....
8.21.4	Each lifeboat self contained air support system generally examined and found satisfactory								.....
8.21.5	Each lifeboat water spray system generally examined and found efficient								.....
8.21.6	Each lifeboat water spray system/self-contained air support system satisfactorily tested								.....
8.21.7	Each motor lifeboat provided with sufficient fuel								.....
8.21.8	Built-in buoyancy found in good condition as far as seen								.....
8.21.9	Each lifeboat found in good condition and fully equipped								.....
8.21.10	All sheaves, blocks, falls, lifting hooks, hook foundations and securing arrangements, release arrangements and all moving parts found free and well lubricated or made good at time of survey								.....
8.21.11	All survival craft launching and recovery appliances found satisfactory when examined as far as practicable								.....
8.21.12	Each lifeboat fitted with retro-reflective material								.....
8.21.13	For Self Contained Air System in totally enclosed life boats: The provision of refilling air bottles if the air pressure of bottle drops by 20%								.....
8.21.14	In case of Fire Protected Life Boats, the arrangements for flushing the water spray fire-protection system with fresh water and allowing complete drainage								.....
8.22	<b>RESCUE BOAT (DEDICATED SURVIVAL CRAFT * OR PORT*/ STBD* LIFE BOAT)</b>								
8.22.1	Rescue boat examined, found in good condition and fully equipped								.....
8.22.3	Launching and recovery appliance found satisfactory when examined as far as practicable								.....
8.22.4	Release hook, falls and associated moving parts (blocks, sheaves, etc.) were found free and well lubricated or made good at time of survey.								.....
8.22.4	The rescue boat was fitted with retro reflective material								.....
8.23	<b>LIFEBOAT DISTRESS SIGNALS</b>								
	Indicate expiry date (E) or manufacture date (M) of the following								
		E/M	BOAT 1	E/M	BOAT 2	E/M	BOAT 3	E/M	BOAT 4
8.23.1	Two orange smoke signals								
8.23.2	Four parachute signals								
8.23.3	Six red hand-held flares								
8.23.4	Lifeboat distress flares found in satisfactory condition								.....
8.24	<b>SURVIVAL CRAFT LAUNCHING AND EMBARKATION ARRANGEMENTS</b>								
8.24.1	Emergency power, lighting and onboard communication and alarm all operating satisfactorily								.....
8.24.2	Means of preventing discharge of water into boats found satisfactory								.....
8.24.3	Illumination of stowage and launching positions found in working order								.....
8.24.4	Lifelines on davit spans and bousing tackles were found or placed in good condition (if applicable)								.....
8.24.5	Lifeboat embarkation ladders found or placed in good condition								.....
8.24.6	Abandon ship audible signals operating satisfactorily								.....
8.24.7	Operative test of all emergency power supplies, emergency lighting and general alarm systems satisfactorily carried out								.....
8.24.8	All embarkation arrangements and launching gear found to be satisfactory when examined as far as practicable								.....
8.24.9	IMO recommended symbols as required posted throughout the vessel								.....
8.24.10	Lifeboat launching instructions posted								.....



8.25	<b>LIFE RAFTS</b>						
8.25.1	Life raft stowage will facilitate proper release including float free facility where required	.....					
8.25.2	Launching instructions posted	.....					
8.25.3	The embarkation arrangements of inflatable liferafts and, where provided, the launching arrangements of davit launched liferafts found satisfactory.	.....					
8.26	<b>RIGID LIFERAFTS</b>						
8.26.1	Each liferaft examined, found in a good condition, stowed to facilitate rapid launching and fitted with retro reflective material	.....					
8.26.2	Raft and equipment complete and in good condition and raft with retro reflective material	.....					
	Indicate expiry date (E) or manufacture date (M)						
		E/M	R/L/RAFT. 1	E/M	R/L/RAFT 2	E/M	R/L/RAFT.3
8.26.3	Two orange smoke signals						
8.26.4	Four parachute signals						
8.26.5	Six red hand-held flares						
8.27	<b>STOWAGE OF SURVIVAL CRAFT AND RESCUE BOATS</b>						
8.27.1	Stowage of Survival craft and rescue boat satisfactory and do not interfere with operation of other survival crafts and rescue boats.	.....					
8.27.2	Survival crafts are fully equipped and in a state of continuous readiness	.....					
8.28	<b>LIFEJACKETS</b>						
8.28.1	Complete number of approved lifejackets, as shown on Record of Equipments for HSC Safety Certificate each with whistle and light	.....					
8.28.2	Each lifejacket found in good condition	.....					
8.28.3	Lifejackets stowed in accessible and clearly marked places	.....					
8.28.4	When checked for, proper stowage, a random examination of the condition of life jackets gave satisfactory results	.....					
8.28.5	Each lifejacket fitted with retro reflective material	.....					
8.28.6	Life Jacket Lights as per LSA Code Chapter II/2.2.3 (Manual switch provided if of flashing type)	.....					
8.28.7	Validity of life jacket lights. ....						
8.29	<b>LIFEBUOYS, IMMERSION SUITS/ANTI-EXPOSURE SUITS</b>						
8.29.1	Lifebuoy:	.....					
8.29.2	Complete in number as shown on Record of Equipments for HSC Safety Certificate and in good condition	.....					
8.29.3	Of highly visible colour, fitted with brackets and readily accessible	.....					
8.29.4	Marked in block letters with name and port of registry of ship	.....					
8.29.5	Fitted with lines, lights or light and smoke as on Record of Equipment for HSC Safety Certificate	.....					
8.29.6	Capable of being rapidly cast loose	.....					
8.29.7	Fitted with retro reflective material	.....					
8.29.8	MOB marker expiry date: 1 ..... 2 .....						
8.29.9	Immersion suits/Anti-exposure suits and thermal protective aids complete as on Record of Equipment for HSC Safety Certificate and in good condition, including that, stowed in survival craft as equipment	.....					
8.29.10	Monthly Inspection and testing of Immersion suits carried out	.....					
8.29.11	All Immersion suits/ anti exposure suits seams tested every 3 years (more frequently after 10 years). Last testing done .....	.....					

## 9. MACHINERY

9.1	Verification of machineries and associated piping systems and fittings relating to main machinery and aux. power are protected as to reduce any danger to persons, due regard being paid to moving parts, hot surfaces and other hazards. Surfaces with temperature exceeding 220°C where impingement of flammable liquids may occur are insulated with impervious insulation. Draining of excess fuel and oil to safe position. Every pressure vessel and associated piping systems is fitted with adequate means to prevent over-pressures in service.	.....
9.2	Confirmation that normal operation of propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative. Test of first start arrangement.	.....
9.3	Verification of provision of two independent means of propulsion for category B passenger crafts. Essential machinery and control can be maintained in the event of a fire or other casualties in any one compartment on board (applicable only for Cargo crafts & Category B Passenger Crafts).	.....
9.4	Test of engine safety monitoring devices e.g. over speed, lubricating oil low pressure, loss of cooling medium, high temperature, malfunction of moving part, overload. Test of independent means (at least two is to be provided) of stopping the engines quickly from the operating compartment under any operating conditions.	.....
9.5	Confirmation that high pressure fuel delivery line are jacketed and led to a collection tank. Test of leak-off alarm.	.....
9.6	Verification and test of automation and remote controls, bilge alarm system, remote machinery instrumentation and alarm system. Test of controls from craft's operating compartment and any other machinery controls provided as per requirement.	.....
9.7	Verification of the ventilation arrangement for machinery spaces. Confirmation that arrangement for protection against ingress of foreign matter at the intakes is in satisfactory condition. Where low flash point fuels are used, Verification that an interlock is fitted for operation of ventilation prior to starting engines.	.....
9.8	Verification of the arrangements provided to ensure that, in the event of failure in any liquid cooling system, it is rapidly detected and alarmed (visual and audible) and means instituted to minimise the effects of such failures on machinery serviced by the system.	.....
9.9	Where Gas turbines are fitted, verification of the arrangement with due regard to probable shedding of compressor or turbine blades will not endanger the craft and the persons. Verification of the protection arrangements provided to turbine against ingestion of contaminants, accumulation of salt deposits, air intake from icing. Suitable guard fitted. Test of protection and safety devices for the gas turbine.	.....

## 10. AUXILIARY SYSTEMS

10.1	Examination of any non-metallic piping, if located in a system which penetrates the ship's side and are located below the deepest load waterline to confirm that these are in satisfactory condition and have been replaced at an interval recommended by the manufacturer.	.....
10.2	Verification that oil fuel, lubricating oil and other flammable oil lines are suitably screened/protected, flexible pipes in use are of approved type. Illumination of machinery spaces containing oil fuel systems containing heated oil under pressure. Provision of save-all or gutters under every fuel tank. Provision of oil level gauges in place of sounding pipes, if fitted (cylindrical gauge glasses are not allowed).	.....
10.3	Where daily service tanks are filled automatically or remotely, verification of the means provided to prevent overflow (level gauges, etc.).	.....
10.4	Where daily service tanks or settling tanks are heated and if the flashpoint of the oil can be exceeded by the heating system, verification of the high temperature alarm is satisfactory.	.....
10.5	Verification and test of bilge pumping and drainage. Test of self priming arrangements. Verification and test of emergency bilge suction arrangement and provision of extended spindle above machinery space floor plates. Provision of bilge alarm for unattended machinery space. Marking of all manually operated valves. Distribution of bilge pumps, their source of power and provision of an emergency bilge pump in case of a category B passenger craft.	.....
10.6	Where exhaust is discharged through hull in the vicinity of water line, verification of the means to prevent water flooding or entering the exhaust manifold.	.....

## 11. REMOTE CONTROL, ALARM AND SAFETY SYSTEMS

11.1	Verification of arrangement for transfer of control between various stations, two way communication between all stations including the look-out position, provision of back up system for category B passenger crafts and cargo craft.	.....
11.2	Verification and test of emergency controls from operating compartment e.g. fixed fire fighting system, closing ventilation opening/fans, shut off fuel supplies, disconnect electrical power supplies, stop main engine/aux. engine. Provision of emergency control at one or more station outside operating compartment for category B crafts.	.....
11.3	Verification and test of alarm (audio and visual) systems provided at craft's control position. Confirmation that alarms can be maintained until they are accepted and the visual indications of individual alarms remain until the fault has been corrected, in case a second fault occurs before the first is rectified, the audible and visual alarms operates again, alarm systems incorporate a test facility. Provision of separate alarm with visual indication distinct from others provided for conditions requiring action to prevent degradation to an unsafe condition. Verification of monitoring system for fire and flooding in passenger, cargo and machinery spaces.	.....
11.4	Verification that where overriding function is fitted for automatic shutdown system for the main propulsion machinery, these preclude any inadvertent operation, audible and visual alarms are activated when shut down system is activated.	.....

## 12. ELECTRICAL INSTALLATIONS

12.1	Verification of the safety arrangements against electrical shock, fire, other hazards of electrical origin. Verification that exposed metal parts of electrical machines are suitably earthed, main switchboard placed relative to the main generating station to ensure integrity of the normal supply in one space, easy access is available and switchboard is guarded with provision of nonconducting mats/gratings, segregation of distribution system for main and emgy power provided.	.....
12.2	Verification of provision for detecting earth faults/monitoring the insulation level is available with alarm function.	.....
12.3	Confirmation that electrical wiring/cables are of approved flame retardant type and electrical equipments in hazardous area are "safe type"	.....
12.4	Confirmation that electrical aux. services necessary for normal operation and habitable condition can be maintained by main source of power without recourse to emgy source of power, with any one generator or its primary source of power out of operation, the remaining generating set is capable of providing the electrical services necessary to start the main propulsion plant from dead craft condition.	.....
12.5	Test of short circuit and overload protecting device.	.....
12.6	Verification that the emergency source of electrical power and associated transforming equipments, transitional source of power, emgy switchboard are in satisfactory condition.	.....
12.7	When the emgy source of power is a generator, verification of the automatic starting function and confirmation that electrical power can be restored in 45s. Verification that the emergency switchboard supply from main switchboard during normal operation and interconnector feeder protected at main switchboard against overload and short circuit and disconnect upon failure of main source of electrical power, Provision of disconnection of non-emergency circuit when emergency source of power is supplied, Provision of transition source of power.	.....
12.8	Verification to confirm that emergency generating set is equipped with starting devices with a stored energy capability of at least three consecutive starts and arrangement exists to preclude critical depletion of the stored energy (not required where a second independent means of starting is provided). A second source of energy is provided for an additional three starts within 30 minutes (not required where manual starting is provided).	.....
12.9	Verification of the provision of transitional source of power.	.....
12.10	Where the emergency source of electrical power is an accumulator battery, means of charging and automatic connection to emergency switchboard to verify. No accumulator battery is stored in the same space as the emgy switchboard. Indicator for battery discharge is provided in the craft's operating compartment.	.....
12.11	Where steering is dependent on one device, verification that electrical power supply through two independent circuits (one of which is fed through emergency switchboard or an independent power supply) are in order. Verification and test of short circuit protection, overload alarm and where provided protection against excess current(et point should not be less than twice the full load current)	.....

12.12	Verification of storage of accumulator batteries including provision of ventilation and confirmation that electrical or other light fitting are installed in the compartment are of “safe type”. (accumulator batteries are not allowed to be stored in the crew accommodation).	.....
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### 13. SHIP BORNE NAVIGATIONAL SYSTEMS, EQUIPMENTS AND VDR

13.1	Confirmation that testing of VDR and AIS carried out by an approved testing and servicing facility	.....
13.2	Standard Magnetic Compass	.....
13.2.1	Compass Deviation Record Book being kept up-to-date.	.....
13.3	Gyro Compass (Required for passenger craft certified to carry 100 passengers or more and cargo craft)	.....
13.4	Arrangement for supplying visual compass readings to emergency steering position	.....
13.5	Gyro Compass bearing repeaters	.....
13.6	Gyro Compass heading repeaters	.....
13.7	Automatic steering Aid (Automatic Pilot) (with provision to change to manual mode)	.....
13.8	Transmitting Heading Device (Required for passenger craft certified to carry 100 passengers or less)	.....
13.9	Means of steering and means to show the mode of propulsion system(s)	.....
13.10	Electronic Chart Display and information system (ECDIS)/Nautical charts* Performance Standard of ECDIS: MSC.232(82)/ A.871(19) as amended	.....
13.11	Back up arrangements for ECDIS: 2nd ECDIS/ Nautical charts	.....
13.12	Nautical publications	.....
13.13	Receiver for a Global Navigation Satellite System / a Terrestrial Radio Navigation System	.....
13.14	Radar 9GHZ (3 cm)	.....
13.15	Radar 3GHZ (10 cm) (required for craft of 500GT and upwards or craft certified to carry more than 450 passengers in addition to 9GHz radar)	.....
13.16	Automatic Radar Plotting Aids (ARPA)	.....
13.17	Auto Tracking Aid (ATA)	.....
13.18	Automatic Identification System (AIS)	.....
13.19	Voyage Data Recorder (VDR) (required for all passenger craft irrespective of size and cargo craft of 3000GT and upwards)	.....
13.20	Speed and Distance measuring device (speed and distance measuring devices on craft fitted with an ARPA or ATA shall be capable measuring distance through water)	.....
13.21	Echo Sounding Device (Required for non-amphibious craft)	.....
13.22	Rudder Angle Indicator / Indicator showing direction of steering thrust	.....
13.23	Rate of turn indicator (required for craft of 500GT and upwards. Also required for crafts less than 500GT where the turn rate exceed safety level 1)	.....
13.24	Sound reception System for totally enclosed navigation bridge	.....
13.25	Daylight signaling lamp and source of power	.....
13.26	Search Light	.....
13.27	Night Vision Equipment	.....
13.28	Radar reflectors (required for craft of 150GT and below)	.....

### 14. RADIO COMMUNICATIONS

#### Signal letters and identification codes:

Call sign: .....	ID for DSC (VHF):.....
Selcall No. for NBDP:.....	ID for DSC (MF/HF): .....
1 <sup>st</sup> ID for INMARSAT-B/ Fleet 77: .....	ID for DSC (MF):.....
2 <sup>nd</sup> ID for INMARSAT- B/ Fleet 77: .....	1 <sup>st</sup> ID for INMARSAT-C: .....
ID for Satellite EPIRB:.....	2 <sup>nd</sup> ID for INMARSAT-C: .....

Notes for Section 14 only					
Note 1: Results of survey to be marked “Y” (Yes), “N” (No) or “N/A” (Not Applicable)					
Note 2: Functional tests are to be verified for compliance with IMO performance standard.					
Sea area in which vessel is certified to operate: A1 <input type="checkbox"/> ; A1+A2 <input type="checkbox"/> ; A1+A2+A3 <input type="checkbox"/> ; A1+A2+A3+A4 <input type="checkbox"/> (Reg. IV 12)					
Any other specific area: ..... <input type="checkbox"/>					
14.1	<b>DOCUMENTATION</b>				
14.1.1	Valid radio license issued by flag administration available on board				.....
14.1.2	Verification of radio operators certificate				.....
	<b>Name</b>	<b>Rank</b>	<b>Certificate Held</b>	<b>Expiry</b>	<b>Issued by</b>
1 <sup>st</sup> Operator					
2 <sup>nd</sup> Operator					
3 <sup>rd</sup> Operator					
14.1.3	Verification of radio log				.....
14.1.4	Verification that up to date International Telecommunication Convention (ITU) publication are available on board				.....
14.1.5	Verification that operating manuals are available, on board for all equipment				.....
14.1.6	Verification that service manuals are available on board for all equipment, if at sea maintenance is the declared option.				.....
14.1.7	Confirmation that a Radio record (logbook) has been kept in the period since last survey to satisfaction of the administration.				.....
14.1.8	Verification whether any new equipment has been fitted and, if so, confirmation that it has been approved to appropriate performance standards prior installation and that any changes are reflected in the appropriate certificate/ record.				.....
14.1.9	Verification that plans for the provision and position of the radio installation (including source of energy and antenna) and the radio life saving appliances are available on board				.....
14.2	<b>SELECTED METHOD OF MAINTENANCE</b>				
	Duplication of equipment				.....
	Shore-based maintenance				.....
	At –sea maintenance				.....
14.3	<b>GENERAL CHECKING OF RADIO INSTALLATION</b>				
14.3.1	Are all radio controls for operating the radio installation adequately illuminated				.....
14.3.2	Are ships call sign, ship station identity, and other codes, as applicable, for use of the radio station posted				.....
14.3.3	Is the radio installation protected from adverse environmental conditions				.....
14.3.4	Is the radio installation so located that no harmful interference affects its use and so located to ensure the greatest possibility of operational availability.				.....
14.3.5	General examination of all antennas (including INMARSAT antennas) including insulation and safety				.....
14.3.6	Are spare parts and tools available				.....
14.3.7	For at-sea maintenance are additional technical documentation, tools, measuring equipment and spare parts available.				.....
14.3.8	Facilities for bridge wings communications				.....
14.3.9	Verification of the equipment fitted in accordance with Record of Equipment for HSC Safety Certificate				.....
14.3.10	Verification that all two way communication equipment capable of automatically including ship’s position in the distress alert are automatically provided with the information from internal or external navigation receiver. If such receiver is not on board, verification of procedure for manually updating the position and the time of determining the position at intervals not exceeding 4 hours.				.....
14.4	<b>SOURCES OF ENERGY</b>				
14.4.1	Main	...	Emergency	...	Reserve
					...

14.4.2	Confirmation that the reserve source of energy has sufficient capacity to operate the primary or the duplicated equipment for 1 hours or 6 hours as appropriate.	.....
14.4.3	If the reserve source of energy is battery, verification where appropriate, of its good condition by specific gravity measurement or voltage measurement.	.....
14.4.4	If the reserve source of energy is battery, verification that the chargers are capable of re-charging the battery within 10 hours.	.....
14.5	<b>COMPOSITION OF RADIO INSTALLATION</b>	
	VHF	MF
Primary System	...	...
Duplicated System	...	...
14.6	<b>V.H.F RADIO INSTALLATION</b>	
14.6.1	Checking for operation on channel 6, 13 and 16	.....
14.6.2	Checking proper operation of all controls	.....
14.6.3	Test call of DSC encoder	.....
14.6.4	Channel 70 DSC watch receiver, including confirmation that correct Maritime Mobile Service Identity (MMSI) is programmed in the equipment, and verification of DSC alarm	.....
14.6.5	Checking for operation from main, emergency (if fitted), and reserve source of energy	.....
14.7	<b>MF/HF* RADIO TELEPHONE INSTALLATION</b>	
14.7.1	General examination of MF/HF* Radio telephone equipment	.....
14.7.2	Verification that equipment operates from main, emergency (if provided) and reserve source of energy	.....
14.7.3	Verification of the MF/HF* Radio telephone equipment for correct operation by contacting a coast station and/or measuring transmission quality and radio frequency output	.....
14.7.3.1	During the survey	
a)	Is the DSC equipment tested in Routine call category with the ship station and or a shore station.	.....
b)	Is the DSC equipment tested in Safety call category with a ship station and or a shore station.	.....
14.7.4	Verification of antenna tuning in all appropriate bands.	.....
14.7.5	Verification that control unit on bridge has first priority for purposes of initiating distress alerts, if control units are provided outside the navigation bridge.	.....
14.7.6	Checking receiver performance by monitoring known radio station on all appropriate bands.	.....
14.7.7	Verification that the correct selective calling number is programmed in the equipment.	.....
14.7.8	Verification of availability of the MF/HF* DSC alarm.	.....
14.7.9	Verification that distress /safety DSC frequencies are being monitored on the MF/HF* DSC watch receiver	.....
14.8	<b>INMARSAT SHIP EARTH STATION</b>	
14.8.1	Verification that equipment operates from main, emergency (if provided) and reserve source of energy	.....
14.8.2	Verification of distress function by means of an approved test procedure, where possible	.....
14.8.3	Verification of correct operation by inspection of recent hard copy of test call by telex or telephone.	.....
14.9	<b>NAVTEX RECEIVER</b>	
14.9.1	Verification for correct operation by monitoring incoming message or inspecting recent hard copy/display unit	.....
14.9.2	Performance test run of the self test program if provided	.....
14.10	<b>ENHANCED GROUP CALL (EGC)</b>	
14.10.1	Verification for correct operation and area by monitoring incoming messages or by inspecting recent hard copy.	.....
14.10.2	Performance test run of the self test programs, if provided.	.....
14.11	<b>HF-NBDP EQUIPMENT</b> (applicable if ship exempted from INMARSAT EGC receiver)	
14.11.1	Examination if appropriate of the radio equipment for receipt of MSI by HF/NBDP	.....
14.11.2	Performance test run of the self test programs, if provided.	.....

14.12	<b>TWO WAY RADIO TELEPHONE APPARATUS</b>		
14.12.1	Examination of two way VHF radio apparatus including verification of its correct operation on both channel 16 and any other channel through a test with another fixed or portable VHF installation.		.....
14.12.2	Expiry of Primary Battery	1. ....	2. .... 3. ....
14.12.3	Charging arrangement for battery, where rechargeable battery is used		.....
14.13	<b>EPIRB</b>		
	VHF EPIRB ...	406 MHz EPIRB ...	
14.13.1	Verification of condition by visual examination, position and mounting for float free operation		.....
14.13.2	Self test routine		.....
14.13.3	Labeling of EPIRB		.....
14.13.3.1	Verification of battery expiry date	1. ....	2. ....
14.13.3.2	Manufacturer's serial number		.....
14.13.3.3	Verification that call sign of the ship marked on the EPIRB		.....
14.13.4	Verification of hydrostatic release and its expiry date	1. ....	2. ....
<b>Additionally for 406 MHz EPIRB</b>			
14.13.5	Verification of emission on operational frequencies, coding and registration on the 406 MHz signal without transmission of a distress call to the satellite		.....
14.13.6	Annual Testing of the satellite EPIRB carried out on: .....		
14.13.7	Date system last replaced or Shore based maintenance carried out .....		
14.13.8	Verification that EPIRB ID is clearly marked on the outside of the equipment		.....
14.14	<b>SECONDARY MEANS OF ALERTING</b>		
Designated equipment			
	VHF (DSC) ...	INMARSAT B/Fleet 77 ...	INMARSAT -C ...
	MF (DSC) ...	HF (DSC) ...	406 MHz EPIRB ...
	VHF EPIRB ...		
14.15	<b>RADIO LIFE SAVING APPLIANCES</b>		
14.15.1	Operational test of Survival craft radar transponder/ AIS SART*		.....
14.15.2	Battery expiry date	1. ....	2. ....
14.16	<b>AUTOMATIC IDENTIFICATION SYSTEM</b>		
14.16.1	Operational test carried out		.....
14.17	<b>SHIP SECURITY ALERT SYSTEM</b>		
14.17.1	Functionality test carried out with competent authority		.....
14.18	<b>VOYAGE DATA RECORDER/ SIMPLIFIED VOYAGE DATA RECORDER</b>		
14.18.1	Operational test carried out		.....
14.19	<b>LONG RANGE IDENTIFICATION AND TRACKING</b>		
14.19.1	Conformance Test Certificate is available on board		.....
14.19.2	DNID member number registered by CSP in the LRIT ship borne equipment (i.e. Sat C) is not disabled or deleted		.....
14.20	<b>ON PASSENGER CRAFTS ONLY</b>		
14.20.1	Two way on-scene radio communication on 121.5 MHz and 123.1 MHz from navigating bridge.		.....
14.20.2	A GOC Certified operator assigned to perform only radio communication duties during distress incidents.		.....
14.21	<b>GMDSS RADIO OPERATORS</b>		
14.21.1	Is the Ship operator(s) able to use the GMDSS equipment and carry out function tests for transmitting and receiving distress and safety alerts		.....
14.21.2	Is ship's operators able to explain correct procedures for the followings:		.....

14.21.2.1	Canceling a false distress alert (Res.A.814(19))	.....
14.21.2.2	Receiving a distress alert.	.....
14.21.2.3	Sending a distress alert	.....

**15. OPERATING COMPARTMENT LAYOUT**

15.1	Verification of the operating compartment/navigating work station with due regard to ergonomics, temperature/ventilation, safety measures, field of vision and blind sectors, seat for operating crew, lighting, provision of clear view through window, provision to avoid glare, reflection and adjust lighting intensity.	.....
15.2	Verification of internal communication facilities e.g. between the operating compartment and other spaces, communication between crew members in both normal and emgy conditions, provisions for means to monitor, receive and transmit radio safety messages at the operating compartment, means of making public address and safety announcements.	.....

**16. STABILISATION SYSTEMS**

16.1	Verification of automatic stabilization system, provision for overriding automatic safety control and cancel the override from main operating station.	.....
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**17. HANDLING, CONTROLLABILITY AND PERFORMANCE**

17.1	Confirmation that information on change in craft behavior during transition from one type of operating surface or mode to another and craft operating limitations due to surface irregularities is available to the vessel master.	.....
17.2	Confirmation that information on max safe speeds and min depth of water for all modes of operation and for amphibious craft, clearance of the hard structure when cushion-borne are available.	.....

**18. OPERATIONAL REQUIREMENTS**

18.1	Verification that safety provisions have been made by operator as per section 18.1.3 of the Code	.....
18.2	Demonstration of emgy evacuation	.....
18.3	Witnessing rescue boat and fire drill	.....

\_\_\_\_\_  
 Surveyor(s) to Indian Register of Shipping  
 Date: .....  
 Port: .....