INSTRUCTIONS

* Manufacturers’ manuals must be available for each appliance or item of equipment onboard. **Post relevant operating instructions in a language understood by the crew** at appropriate places. All ship’s personnel must be fully familiar and acquaint themselves with the contents of operating manuals for equipment and appliances.
* Record any remark or damage found during the checks, together with any corrective action, in the relevant form.
* Upon completion, keep **the original forms onboard** and forward **a copy to the Company** every month.
* Carry out all checks described below at the stated intervals according to these instructions and the makers’ manuals.
* Thoroughly fille in every checklist. In case something is not applicable, then the record will read N/A or UNKNOWN.
* If it is not possible for a required check to be carried out at the planned interval, then record the reason i.e., Weather conditions, or other.
* **ATTENTION:** Test the fixed fire detection and fire alarm systems at intervals specified in this form by means of equipment producing hot air at the appropriate temperature, or smoke or aerosol particles having the appropriate range of density or particle size, or other phenomena associated with incipient fires to which the detector is designed to respond (SOLAS II-2/ Reg.7.3.2). **DO NOT test by use of “open flame”.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **MONTH/YEAR:** |  |

|  |
| --- |
| **WEEKLY ROUTINES** |

Tick with the **appropriate marks** each box next to the maintenance routines indicating the week of the month during which this inspection is carried out. Marks:

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

| **ITEM** | | **1** | **2** | **3** | **4** | **5** |
| --- | --- | --- | --- | --- | --- | --- |
|  | **~~Echo sounder, Speed & distance indicators~~** |  |  |  |  |  |
|  | ~~Accuracy & operation (echo sounder switched on prior entry in port & on departure). Print outs identify for date/time~~ |  |  |  |  |  |
|  | ~~Log speed indicator: Trailing log, electric log, combination of speed/log indicator, cross-check data obtained, error in limit, read from conning position~~ |  |  |  |  |  |
|  | **~~Gyro Compass~~** |  |  |  |  |  |
|  | ~~Settling hours, residual steady error, divergence between master compass and repeaters~~ |  |  |  |  |  |
|  | ~~Automatic alarm (heading info, light)~~ |  |  |  |  |  |
|  | ~~Entries in compass error book (courses to steer & gyro compass errors checked when possible using azimuth or transits & recorded once a watch)~~ |  |  |  |  |  |
|  | **~~Gyro Compass repeaters~~** |  |  |  |  |  |
|  | ~~Readings against master compass, accuracy, discrimination of the monitor & operation (checks against master compass at least once a watch and after excessive maneuvering)~~ |  |  |  |  |  |
|  | **~~Magnetic Compass~~** ~~[STCW Code/Sec. A-VII, Flag Requirements]~~ |  |  |  |  |  |
|  | ~~Deflection of card, error due to friction, time of return, lighting & operation (projector lens, heading info, sphere & bracket, flinders bar, magnet, hood, clinometer, bubbles, spare bowl, readable-light bulb)~~ |  |  |  |  |  |
|  | ~~Entries in compass error book (courses to steer & magnetic compass errors checked where possible using azimuth or transit bearings & recorded once a watch)~~ |  |  |  |  |  |
|  | **~~Radar~~** |  |  |  |  |  |
|  | ~~Operation, accuracy, discrimination of monitor (hood/gain, tuning/ VRM brilliance/rain/sea clutter/operation modus–relative motion, head up)/ (EBL/X-range/S-range, distance scale, heading marker)~~ |  |  |  |  |  |
|  | ~~Heading marker alignment needs periodically checking against both the compass heading and the fore and aft line of the ship~~ |  |  |  |  |  |
|  | **~~ARPA~~** |  |  |  |  |  |
|  | ~~Target info (speed, course, CPA, TCPA, target distance & bearing), ship input, danger zone alarm, lost target alarm, fault alarm, non-plot ship enters guard zone alarm, lost fix point alarm, panel)~~ |  |  |  |  |  |
|  | ~~Auto-pilot, Rate of turn indicator, Rudder angle indicator, GPS, Decca~~ |  |  |  |  |  |
|  | ~~Operation - Rate of turn indicator read from donning position~~ |  |  |  |  |  |
|  | ~~Rudder angle indicator: dimmer, read from donning position, remote loc. indicators (bridge wings, steering gear). Zero setting correct~~ |  |  |  |  |  |
|  | ~~GPS/SATNAV: Position consistent chart, mode switch, position fixing book maintained~~ |  |  |  |  |  |
|  | NAVTEX, Weather fax |  |  |  |  |  |
|  | ~~Operation, cleanliness of printer’s head, printouts, weather chart quality (monitor incoming messages or inspect a hard copy)~~ |  |  |  |  |  |
|  | ~~Execution of self-test program~~ |  |  |  |  |  |
|  | Condition of whip antenna |  |  |  |  |  |
|  | Navigational & Signaling lights, lamps, switchboard & alarm panel |  |  |  |  |  |
|  | Lamps, glass covers, spare bulbs and panel |  |  |  |  |  |
|  | Portable battery, covers and carrying straps |  |  |  |  |  |
|  | Test on main/secondary power supply, blackout simulation test (light failure gives audible & visible alarm) |  |  |  |  |  |
|  | ~~VHF/DSC Installation (instructions displayed)~~ |  |  |  |  |  |
|  | ~~Perform channel select test. Check emergency power connection~~ |  |  |  |  |  |
|  | ~~Operation on VHF channels. Check VHF transmission/ reception~~ |  |  |  |  |  |
|  | ~~HF direct printing radio telegraph receiver - Check operation~~ |  |  |  |  |  |
|  | **~~INM-A, SATCOM, INM-B~~** ~~digital,~~ **~~INM-C EGC~~** ~~analog,~~ **~~INM-M~~** ~~digital,~~ **~~INM-FLEET~~** |  |  |  |  |  |
|  | ~~Print quality, printers~~ |  |  |  |  |  |
|  | ~~Antenna radome (INM-A-B-M)~~ |  |  |  |  |  |
|  | ~~Alarms and perform self-test~~ |  |  |  |  |  |
|  | **~~2-way VHF Radio Telephone~~** ~~(waterproof type) - Battery, battery expire & chargers - operation on both channel 16 & any other channel through a test with another fixed or portable VHFs~~ |  |  |  |  |  |
|  | **2-way VHF Radio Telephone for Fire-fighting Teams** (explosion-proof type or intrinsically safe) - Battery, battery expire & chargers - Operation on both channel 16 & any other channel through a test with another fixed or portable VHFs |  |  |  |  |  |
|  | **~~MF/HF DSC Installation~~** |  |  |  |  |  |
|  | ~~Operation of MF/HF Radiotelephone - Aerials & insulators~~ |  |  |  |  |  |
|  | ~~Radio batteries condition & chargers’ efficiency~~ |  |  |  |  |  |
|  | ~~Daily tests & reports in GMDSS Log Book~~ |  |  |  |  |  |
|  | **GMDSS antenna:** Antennas & INMARSAT antennas/feeders (insulation, safety), VHF/MF/HF antennas |  |  |  |  |  |
|  | **~~GMDSS VHF DSC operation~~** |  |  |  |  |  |
|  | ~~Operation of VHF/DSC equipment (not on ch.16)~~ |  |  |  |  |  |
|  | ~~Transmission & reception (routine or test call to a coast station or another ship). Check audibility of VHF/DSC alarm (operates from main, emergency (if any) & reserve source of energy). VHF/DSC: Test on Ch.70 to near coast station & check response to Ch. 70 (advise coast radio station prior)~~ |  |  |  |  |  |
|  | **GMDSS MF operation** |  |  |  |  |  |
|  | Operation of MF radiotelephone (contact a coast station and/or measure transmission line quality & radio frequency output) |  |  |  |  |  |
|  | Receiver of the MF radiotelephone by monitoring well-known stations on all appropriate bands |  |  |  |  |  |
|  | Operation of the DSC controller (test call on MF to a coast station-if permitted, off-air self-test program of the DSC controller) |  |  |  |  |  |
|  | Audibility of the MF/DSC alarm |  |  |  |  |  |
|  | Verify that a continuous watch is being maintained on the MF/DSC watch receiver(s) whilst keying MF radio transmitters |  |  |  |  |  |
|  | Operation of MF/DSC watch receiver(s) (test call from a coast station or another ship) |  |  |  |  |  |
|  | **GMDSS MF/HF operation** |  |  |  |  |  |
|  | Operation of MF/HF radiotelephone (contact a coast station and/or measure transmission line quality & radio frequency output) |  |  |  |  |  |
|  | Receiver by monitoring known stations on all appropriate bands |  |  |  |  |  |
|  | Operation of reserve source energy (other than battery) |  |  |  |  |  |
|  | Operation of DSC controller (test call on MF/HF to a coast station-if permitted, off-air self-test program of the DSC controller) |  |  |  |  |  |
|  | Audibility of the MF/HF DSC alarm |  |  |  |  |  |
|  | Verify that a continuous watch is being maintained on the MF/DSC watch receiver(s) whilst keying MF radio transmitters |  |  |  |  |  |
|  | Operation of MF/HF DSC watch receiver(s) |  |  |  |  |  |
|  | **INMARSAT Ship Earth Station** |  |  |  |  |  |
|  | Operation, a recent hard copy, test call, self-test |  |  |  |  |  |
|  | Distress function by means of an approved test procedure |  |  |  |  |  |
|  | **GMDSS – HF NBDP equipment** |  |  |  |  |  |
|  | Operation (check incoming messages, inspect a hard copy) |  |  |  |  |  |
|  | Execution of the self-test program if provided |  |  |  |  |  |
|  | **EPIRB (s) and Radar Transponders (SARTs)** [MSC.1/Circ. 1040, MSC.1/Circ 1039, SOLAS IV] |  |  |  |  |  |
|  | Protection cover, position and line to be free |  |  |  |  |  |
|  | Test facility and entries of test in the Radio Log |  |  |  |  |  |
|  | Check 406 MHz EPIRB for defects, position, mounting (free float operation), self-test (EPIRB identification-ID marked on the outside & decoding of EPIRB identity number & other information from the transmitted signal) |  |  |  |  |  |
|  | Manual release |  |  |  |  |  |
|  | Batteries expiry date |  |  |  |  |  |
|  | Auto/hydrostatic release mechanism expiry date |  |  |  |  |  |
|  | Test each SART and satellite EPIRB to determine its capability to operate using the means provided without using satellite system |  |  |  |  |  |
|  | Condition, mounting and availability of instructions |  |  |  |  |  |
|  | Check all SARTs using the in-built test facility |  |  |  |  |  |
|  | SARTs: Test against radar (check response on ship’s 9 GHz radar) |  |  |  |  |  |
|  | **ECDIS** (if available) |  |  |  |  |  |
|  | Testing Batteries: Press and hold the button for 3 seconds to initiate the test. The UPS automatically distributes some of the load to batteries for 15 seconds and tests the battery’s performance. If there is a problem with the battery the UPS returns to normal mode and alarms beeps |  |  |  |  |  |
|  | Testing Sensors Input: In Sensor Monitor show the terminal window that for all serial ports connected to a sensor. Check that the data flow is correct. Then for each serial port check that the data are well analyzed |  |  |  |  |  |
|  | **Power supply** |  |  |  |  |  |
|  | Battery’s (by specific gravity or voltage measurement) - Battery voltage & discharge (with battery off-charge & max. required radio installation load connected to the reserve source of energy) |  |  |  |  |  |
|  | Chargers capable of re-charging the battery within 10 hours |  |  |  |  |  |
|  | **Emergency Lights and Embarkation Lights** [SOLAS III] |  |  |  |  |  |
|  | Condition, lights/bulbs and protective frames |  |  |  |  |  |
|  | **General / Emergency / Fire / CO2, St. Gear, Em. generator alarms & switches, Bells, Sirens & Public address system** Check operation |  |  |  |  |  |
|  | **Lifeboat Davits and Winches** [SOLAS III, MSC.1/Circ. 1206] |  |  |  |  |  |
|  | \*Davits to be lubricated – grease nipples are not painted |  |  |  |  |  |
|  | \*Winches to be lubricated. Check gearbox oil level |  |  |  |  |  |
|  | Boats to be lowered to embarkation level |  |  |  |  |  |
|  | Check fall preventing device (if fitted) for conditional adequacy, as per maker’s guidelines |  |  |  |  |  |
|  | Davit limit switches to be checked during re-stowing |  |  |  |  |  |
|  | **Lifeboats & Rescue boats and Engines** [SOLAS III, MSC.1/Circ. 1206] **DO NOT RUN open system water cooled engines for more than 1 minute without sea water cooling** |  |  |  |  |  |
|  | Check the boat (externally, internally) and rails/rowlocks |  |  |  |  |  |
|  | Constraint hooks, slides and greasing |  |  |  |  |  |
|  | Engine operation, filling–up (throttle & gear/reversing gear levers), tools for service, manual of engine water-resistant. Run engines in lifeboats & rescue boats for> 3 min, provided the ambient temperature is above the min. temperature required for starting and running the engine. Gear box and gear box train are engaged satisfactorily |  |  |  |  |  |
|  | Battery, re-charging (replacement every 2 years) |  |  |  |  |  |
|  | FW tks (emptying, cleaning, disinfecting, filling-up) |  |  |  |  |  |
|  | Condition of rudder, tiller, gudgeon and pintle |  |  |  |  |  |
|  | Propeller blades & bearings. Lubricate bearings/moving parts |  |  |  |  |  |
|  | Heaving hook & operation of quick releases. Check their attachment to lifeboat and the on-load release gear being properly and completely reset |  |  |  |  |  |
|  | Instructions for heaving-launching are displayed |  |  |  |  |  |
|  | LO of engine & gearbox (level & condition) & fuel tank level |  |  |  |  |  |
|  | Fuel & water pipes & personnel protection lagging of the exhaust. Exhaust pipe (height, insulation) |  |  |  |  |  |
|  | Water of engine cooling system tank or engine’s water pump. If there is close cooling system, in cold weather, ensure that contains antifreeze - Check tension of V belts |  |  |  |  |  |
|  | After running, drain condense tap in exhaust pipe as necessary |  |  |  |  |  |
|  | **Emergency diesel generator** |  |  |  |  |  |
|  | Oil and water and, if necessary, top up |  |  |  |  |  |
|  | Start function (local & remote) and check engine and alternator |  |  |  |  |  |
|  | Whilst engine is running, check oil, fuel and water leaks, oil pressure and ensure that water temperatures are normal |  |  |  |  |  |
|  | Ensure that DO tank is full |  |  |  |  |  |
|  | Condition of battery; ensure that it is always fully charged and that terminals are free of salts and well-greased with Vaseline |  |  |  |  |  |
|  | **Emergency batteries / Battery room** |  |  |  |  |  |
|  | Perform hydrometer test - Check battery charger |  |  |  |  |  |
|  | Temp within spec- Electrolyte top-up |  |  |  |  |  |
|  | Light intrinsically safe (switch outside) – door watertight |  |  |  |  |  |
|  | Rubber mat, protective equipment (gloves & goggles) and warning label available |  |  |  |  |  |
|  | Room properly ventilated |  |  |  |  |  |
|  | **Fire pumps (Main & Emergency)** [MSC.1/Circ. 1432] |  |  |  |  |  |
|  | Engaging mechanism between prime mover and that pump works smoothly and there are no loose joints or worn parts |  |  |  |  |  |
|  | Operate pump & ensure that water pressure is sustained & water delivered simultaneously to two (furthest) HYDRANTS (2 simultaneous jets of water, test for more than 5 min) |  |  |  |  |  |
|  | Local & remote start & stop (fail-to-safe back-up start eq.: manual /pneumatic/battery). Air starting bottle full |  |  |  |  |  |
|  | Condition of valves and exhaust pipe insulation |  |  |  |  |  |
|  | Bearings are properly and well lubricated |  |  |  |  |  |
|  | Location identify, starting instructions displayed |  |  |  |  |  |
|  | In case of diesel-operating em. pump, ensure that DO tank is full |  |  |  |  |  |
|  | **Water Mist/Spray & Sprinkler Systems** [MSC.1/Circ. 1432] |  |  |  |  |  |
|  | All control panel indicators and alarms are functional |  |  |  |  |  |
|  | Visually inspect pump unit and its fittings |  |  |  |  |  |
|  | Check pump unit valve positions, if valves not locked, as applicable |  |  |  |  |  |
|  | **Fixed fire detection system and alarm system and fixed fire extinguishing systems** [MSC.1/Circ. 1432] |  |  |  |  |  |
|  | Verify all fixed fire-extinguishing system control panel indicators are functional by performing a simulation test (operating the lamp/indicator test switch) - all control/section valves are in the correct position - Record results in form **M030** |  |  |  |  |  |
|  | **E/R fire flaps** - Check condition – check fans for abnormal noise |  |  |  |  |  |
|  | **Fire Doors** [MSC.1/Circ. 1432]: Verify all fire door control panel indicators are functional by operating the lamp/indicator switch |  |  |  |  |  |
|  | **Public Address & General Alarm** [SOLAS III, MSC.1/Circ. 1432] |  |  |  |  |  |
|  | All public address systems and general alarm systems |  |  |  |  |  |
|  | **Self-contained breathing apparatus (SCBA)** [MSC.1/Circ. 1432] |  |  |  |  |  |
|  | Confirm all cylinder gauges are in the correct pressure range |  |  |  |  |  |
|  | Condition and stowage - Check cylinders for leakages |  |  |  |  |  |
|  | **Low-location Lighting, if applicable** [MSC.1/Circ. 1432] - Verify functionality by switching off normal lighting in selected locations |  |  |  |  |  |
|  | **Emergency Escape Breathing Devices (EEBDs)** [MSC.1/Circ. 1432] A general examination of EEBDs, including cylinder gauges to confirm they are in the correct pressure range |  |  |  |  |  |
|  | **Ventilation fans Emergency Stops** |  |  |  |  |  |
|  | Engine Room |  |  |  |  |  |
|  | Accommodation |  |  |  |  |  |
|  | **Bridge Navigational Alarm System** |  |  |  |  |  |
|  | Ensure operation in “ON” mode, whilst the ship at sea and at anchor (never to be set in “: AUTO” mode) |  |  |  |  |  |
|  | Perform ‘loop’ test (the incorporated self-test button may be used for this purpose) |  |  |  |  |  |

|  |
| --- |
| **COMMENTS:** |
|  |

Please sign in the following boxes for **each week** separately:

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **YEAR:** |  |

|  |
| --- |
| **MONTHLY ROUTINES** |

In each box next to each maintenance item, **write the number of the month** of the year during which this inspection is carried out (**1** for January, **2** for February, **3** for March, etc.). Tick with the **appropriate marks** each box next to the maintenance routines indicating the **month of the year** during which this inspection is carried out. Marks:

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

**EXAMPLE**

| **ITEM** | | **MONTH** | **MONTH** | **MONTH** |
| --- | --- | --- | --- | --- |
|  | **Lifejackets and Survival Suits** | 1 | 2 | 3 |
|  | Check attachments & missing/damaged parts. | X |  |  |

| **ITEM** | | **MONTH** | **MONTH** | **MONTH** |
| --- | --- | --- | --- | --- |
|  | **GMDSS installation** |  |  |  |
|  | MF/HF transmitter (auto testing) |  |  |  |
|  | Efficiency of STD-C system (performance Verification Test) |  |  |  |
|  | Efficiency of INMARSAT STD-A signal, (if any) |  |  |  |
|  | Disconnect main power supply from control panel and check proper operation of audio alarm, shutdown of audio alarm on pushing check button & that main equipment remains live |  |  |  |
|  | Check if power is supplied to the duplicate equipment |  |  |  |
|  | Check if main equipment remains in operation when the duplicate equipment attached - check if Batteries ampere meter does not indicate discharging during the above test |  |  |  |
|  | Check if Main power supply reconnected after blackout test and if Main & Duplicate equipment properly operating after the reconnection |  |  |  |
|  | **Automatic Identification System** [SOLAS V] - Check accuracy of own ship’s static, dynamic and voyage related data being transmitted |  |  |  |
|  | **Lifeboat & Life raft launching mechanisms - means of launching Davits** (instructions displayed) [SOLAS III, MSC.1/Circ. 1206] |  |  |  |
|  | Check for damages, correct operation, operation of limit switch |  |  |  |
|  | \*Lubricate all moving parts, launching means & stoppers |  |  |  |
|  | Condition of bolts and securing screws |  |  |  |
|  | Condition of launching means & stoppers (efficient brakes) |  |  |  |
|  | Condition of falls with special regard for areas passing through sheaves and areas of terminations |  |  |  |
|  | Condition of winch & operation of winch motor |  |  |  |
|  | Davits (structure, securing bolt, etc.). Davit span and 2 lifelines of sufficient length to reach water |  |  |  |
|  | Lead sheaves (free to rotate), floating blocks, el. system, gripes, pendant, tricing gear (browsing tackles efficient) |  |  |  |
|  | Lifeboat emergency ladders ready for use - painters correct attached |  |  |  |
|  | **Lifeboat Equipment** [SOLAS III] |  |  |  |
|  | Inspect for missing or damaged parts - Check replaceable parts & expiry dates |  |  |  |
|  | Verify proper operation of magnetic compass |  |  |  |
|  | **Liferafts** (instructions displayed) |  |  |  |
|  | Stowage, markings, date of service, condition of foundations, etc. |  |  |  |
|  | Condition of containers and if package is waterproof |  |  |  |
|  | Painter, lashing, weak link on painter (painter permanently attached to ship & permit manual release of one raft or container at a time) |  |  |  |
|  | Condition of shackle, of sliding hook and turnbuckle |  |  |  |
|  | Date/condition (correctly attached) of hydrostatic release (except fwd liferaft) |  |  |  |
|  | Securing of stopping mechanism (release) on deck |  |  |  |
|  | Ensure that a ladder and a manrope are available for the fwd liferaft |  |  |  |
|  | **Lifesaving Equipment & Visual Signals** (Bridge, Life boats, etc.) [LSA Code] |  |  |  |
|  | Pyrotechnics, Parachute flares, Hand flares and Smoke signals |  |  |  |
|  | Line throwing apparatus |  |  |  |
|  | Location & condition of Rescue Signal-tables |  |  |  |
|  | **Lifejackets and Survival Suits** [SOLAS III] |  |  |  |
|  | Attachments & missing/damaged parts |  |  |  |
|  | Retro-reflective tapes: Unless it’s cover material is retro-reflective, tapes sufficiently wide & long (approx. 5x 10 cm) and placed as high up as possible in at least 6 places on the outside of the jacket & on the inside |  |  |  |
|  | Number, positions, condition and availability of instructions |  |  |  |
|  | **Lifebuoys** [LSA Code] |  |  |  |
|  | Positions, buoyant lines, self-igniting lights, retroreflective tapes (no permanent securing, markings) (Half of the total number with light & one at each side of the ship with line) |  |  |  |
|  | Expiry dates of smoke flares and lights |  |  |  |
|  | Man Overboard quick release arrangements and test remote control from bridge wings (if fitted) |  |  |  |
|  | Expiry date of lifebuoys lights battery. If not marked with expiry date, replace on annual basis, as a minimum |  |  |  |
|  | **Immersion Suits/Anti-Exposure Suits/Thermal Protective Aids** [SOLAS III, MSC.1/Circ. 1047] - Check number and positions |  |  |  |
|  | Closures on storage bag & general condition of bag for ease of removal of suit. |  |  |  |
|  | Donning instructions legible, ensure suit is the type/size identified on the bag |  |  |  |
|  | Lay the suit on a clear flat surface. Make sure the suit is dry inside and out. Visually check for damage. Rips, tears or punctures repaired in accordance with maker’s instructions by a suitable repair station |  |  |  |
|  | Check the zipper by sliding it up and down to check for ease of operation. Using lubricant recommended by the maker, lubricate the front and back of the zipper and the slide fastener. If zipper is not functional, the suit should be inflated and tested for leaks (this test does not apply to integral inflatable lifejackets). Repair leaks as per maker’s instructions by a suitable repair station |  |  |  |
|  | Retro reflective tape for condition and adhesion. Replace if necessary |  |  |  |
|  | Whistle and expiration date of light and battery, if fitted |  |  |  |
|  | Replace suits in the bag with zippers fully opened |  |  |  |
|  | **Safety harnesses, rescue harnesses, rescue lines, lifeline** |  |  |  |
|  | All parts located at appropriate places, no contamination (by oil/ paint) |  |  |  |
|  | Check for damages to webbing or buckles |  |  |  |
|  | Rescue lines to have 2½ inch cordage |  |  |  |
|  | All associated blocks, sheaves, shackles lubricated |  |  |  |
|  | Axes, sovels, crowbars and other associated equipment |  |  |  |
|  | **Instructions for Maintenance & Operation of all equipment** - to be kept at ship’s office |  |  |  |
|  | **Firefighter’s Outfit** [MSC.1/Circ. 1432] |  |  |  |
|  | Verify lockers providing storage for fire-fighting equipment contain their full inventory and equipment is in serviceable condition |  |  |  |
|  | Condition, availability and suitability of additional safety equipment available for ships carrying toxic cargo |  |  |  |
|  | Verify two (2) two-way portable radiotelephone apparatus are carried onboard |  |  |  |
|  | **Breathing apparatus & accessories** (lamp, fireproof lifeline, audible low-pressure alarm) [MSC.1/Circ 1432] - Check stowage & condition, availability & suitability of special compressor with charging manifold and/or additional required air bottles (in excess to those typically required by SOLAS) for ships carrying toxic cargo |  |  |  |
|  | Check air cylinders/spares to be full, readily accessible for use & with no leaks |  |  |  |
|  | Air hose has adequate length to reach from open deck to any part of holds/machinery spaces |  |  |  |
|  | **SCBA set** [BCH Code, IGC Code, IBC Code] |  |  |  |
|  | Position of stowage. Check for missing/damaged parts |  |  |  |
|  | Cylinders (& spares) to be fully charged. Check for air leaks |  |  |  |
|  | High pressure hose, spare gauges, whistle, cylinder securing straps clamped tight etc. |  |  |  |
|  | **SCBA smoke mask** [BCH Code, IGC Code, IBC Code] |  |  |  |
|  | Position & condition (dust with French chalk, in plastic bag) - demand valve & straps - Connections, washers, missing/damaged parts |  |  |  |
|  | **Emergency air compressor** (instructions available) |  |  |  |
|  | Check pressure gauges - auto-stop device test results |  |  |  |
|  | Protection over moving parts and sound protection |  |  |  |
|  | **Emergency Escaping Devices** - Check all units for missing or damaged parts |  |  |  |
|  | **Portable/Semi-portable Fire Extinguishers - Water fog** [Res.A.951(23)] |  |  |  |
|  | Verify all being in place according to Fire Plan and in proper condition |  |  |  |
|  | Check marking/labelling and spare charges\*\* |  |  |  |
|  | **Wheeled (mobile) Fire Extinguishers/Portable Foam Applicators** [MSC.1/Circ. 1432] |  |  |  |
|  | Verify all being in place according to Fire Plan and in proper condition |  |  |  |
|  | Verify that all portable foam applicators are set to the correct proportioning ratio for the foam concentrate supplied and the equipment is in proper order |  |  |  |
|  | Verify that all portable containers or portable tanks containing foam concentrate remain factory sealed, and the maker’s recommended service life interval has not been exceeded |  |  |  |
|  | Portable containers or portable tanks containing foam concentrate, excluding protein-based concentrates, less than 10 years old, that remain factory sealed can normally be accepted without the periodical foam control tests required in MSC.1/Circ. 1312 being carried out |  |  |  |
|  | Protein based foam concentrate portable containers and portable tanks shall be thoroughly checked; if more than 5 years old, the foam concentrate shall be subjected to periodical foam control tests as per MSC.1/Circ. 1312, or renewed |  |  |  |
|  | Foam concentrates of any non-sealed portable containers & portable tanks, portable containers & portable tanks where production data not documented, shall be subjected to periodical foam control tests as per MSC.1/Circ.1312 |  |  |  |
|  | **Fire Hoses, Nozzles, Hydrants, Mains, Pumps, Couplings, Spanners, International Shore Connections** [MSC.1/Circ. 1432] |  |  |  |
|  | Fire boxes (closures/color/markings), hoses / nozzles in place (lockers contain correct spanners for Hydrants/nozzles), properly arranged and in serviceable condition |  |  |  |
|  | Hydrants (caps in place, pressure relief holes clear, hydrant- nozzles-hose couplings matching, hydrant joints, operation/no leak with valves closed) |  |  |  |
|  | Hoses, couplings & “O” rings under pressure. Fire hoses fitted with Jet/Fog nozzles & spanners (fix to couplings/Coupling joints/Spares – clamps not permitted) |  |  |  |
|  | Nozzles at all positions (nozzle joints, spares for all items) |  |  |  |
|  | International shore connection (4 bolts & nuts & 8 washers) |  |  |  |
|  | Operate all fire pumps - confirm that they continue to supply adequate pressure |  |  |  |
|  | Check emergency fire pump fuel supply adequate, and heating system in satisfactory condition, if applicable |  |  |  |
|  | **Fixed fire extinguishing system installation with gas** [MSC.1/Circ. 1432] |  |  |  |
|  | Verify containers/cylinders fitted with pressure gauges are in the proper range and the installation free from leakage |  |  |  |
|  | Condition (ensure that all systems using gas are free from leakage) |  |  |  |
|  | **Fixed firefighting system stop valves** |  |  |  |
|  | All stop valves are in the proper OPEN or CLOSED position |  |  |  |
|  | **Fire Pumps and Fire/Foam Lines & Systems** (Operation instructions to be posted) [MSC.1/Circ. 1432] |  |  |  |
|  | Verify all fire hydrants, hose and nozzles are in place, properly arranged, and in serviceable condition |  |  |  |
|  | Check (open-close) all Fire & Foam valves (painted RED & YELLOW accordingly) & all isolating valves (marked) on deck & in Foam Room |  |  |  |
|  | Ensure that all Fire/Foam Lines pressure gauges are in the proper range |  |  |  |
|  | Fire & Foam Lines (supporting arrangements, pressure test, isolation valves-easy operate, identified, drain cocks marked accordingly, no leakages under pressure, no soft patches/cement boxes/ doublers) |  |  |  |
|  | Start Foam Motor. Check working condition of Motor & pumps. Foam room clear of improperly stored items. Foam liquid level readable |  |  |  |
|  | Fire pump to be started (check working condition of motor & pump). Ensure water pumps are working and they continue supplying adequate pressure |  |  |  |
|  | Check for wastage, seizure of movable parts etc. |  |  |  |
|  | Controls grouped & accessible from outside compartment served |  |  |  |
|  | Foam generators and sources of power supply to be efficient |  |  |  |
|  | Emergency fire pump fuel supply adequate, and heating system in satisfactory condition, if applicable |  |  |  |
|  | **Water Mist, Water Spray and Sprinkler Systems** [MSC.1/Circ. 1432, Rules I-0 Sect.3] - All control, pump unit & section valves in proper open or closed position |  |  |  |
|  | Verify sprinkler pressure tanks or other means have correct levels of water |  |  |  |
|  | Test automatic starting arrangements on all system pumps so designed |  |  |  |
|  | Verify all standby pressure and air/gas pressure gauges are within the proper pressure ranges |  |  |  |
|  | Test a selected sample of system section valves for flow and proper initiation of alarms.   |  |  | | --- | --- | |  | ***Note*** |   *The valves selected for testing should be chosen to ensure that all valves are tested within a one-year period.* |  |  |  |
|  | **Fire alarm indication panel** |  |  |  |
|  | Continuous monitor of power (alarm in failure) |  |  |  |
|  | Check main and emergency power source |  |  |  |
|  | Visual – audible alarm test (buzzer & general alarm) |  |  |  |
|  | Info for spaces covered near panel |  |  |  |
|  | **Fixed Fire Detection and Alarm Systems & Smoke Extraction Systems** [MSC.1/Circ. 1432] - Condition/operation of fire alarm (visual & audible) (buzzer & general alarm) |  |  |  |
|  | Test a sample of detectors and manual call points so that ALL devices have been tested within five years.   |  |  | | --- | --- | |  | ***Note*** |   *For large systems the sample size should be determined by the Administration.* |  |  |  |
|  | Check Main & Em. power source. Alarm in failure of Main & Em. power source. Continuous monitor of power |  |  |  |
|  | Info for spaces covered near panel |  |  |  |
|  | **Fixed CO2 Extinguishing Systems** [MSC.1/Circ. 1318] |  |  |  |
|  | Verify that all stop valves are in the closed position |  |  |  |
|  | Verify that all releasing controls are in the proper position/accessible for use |  |  |  |
|  | Verify that all discharge piping and pneumatic tubing is intact/has no damage |  |  |  |
|  | Verify that all high-pressure cylinders are in place and properly secured |  |  |  |
|  | Verify that the alarm devices are in place and do not appear damaged |  |  |  |
|  | Check safety devices (horn alarms & vents auto cut off) for protected areas |  |  |  |
|  | Examination: wastage, seizure of movable parts, piping & valves |  |  |  |
|  | Cylinder room suitably ventilated and boundaries gas tight (clear of improperly stored items and lighting sufficient) |  |  |  |
|  | Automatic alarm working, delay device fitted, means of operation marked, release system efficient, instructions posted |  |  |  |
|  | Verify that the pressure gauge is reading in the normal range |  |  |  |
|  | Cylinders not corroded, means for checking content fitted |  |  |  |
|  | **Low Pressure Fixed CO2 Extinguishing System (extra requirements)** [MSC.1/Circ. 1318, Rules I-0 Sect.3] |  |  |  |
|  | Verify that the pressure gauge is reading in the normal range |  |  |  |
|  | Verify that the liquid level indicator is reading within the proper level |  |  |  |
|  | Verify that the manually operated storage tank main service valve is secured in the open position |  |  |  |
|  | Verify that the vapor supply line valve is secured in the open position |  |  |  |
|  | **Fixed dry chemical powder systems** [MSC.1/Circ. 1432] |  |  |  |
|  | Verify all control and section valves are in the proper open or closed position, and all pressure gauges are in the proper range |  |  |  |
|  | Check general condition of dry chemical powder system, corrosion, seizure |  |  |  |
|  | Check pressure of nitrogen bottles - check efficiency of a powder sample |  |  |  |
|  | **Fixed Aerosol Extinguishing systems** [MSC.1/Circ. 1432] |  |  |  |
|  | Verify all electrical connections and/or manual operating stations are properly arranged, and are in proper condition |  |  |  |
|  | Verify actuation system/control panel circuits are within maker's specification |  |  |  |
|  | **Fire doors, fire dampers** [MSC.1/Circ. 1432] |  |  |  |
|  | Test (automatic & manual) all fire doors (no hold back hooks fitted) and fire dampers for local operation |  |  |  |
|  | Test means of closing/Check condition of closing mechanisms |  |  |  |
|  | **Emergency Exits / Means of escape** |  |  |  |
|  | Ready for immediate use - Free and unobstructed at all times |  |  |  |
|  | Steps, handrails, not broken, missing or corroded |  |  |  |
|  | Lighting operates satisfactorily - Reflecting IMO symbols in place |  |  |  |
|  | **Main and emergency steering gear** [SOLAS V] |  |  |  |
|  | Main and emergency operation (full movement of rudder) |  |  |  |
|  | Remote control system |  |  |  |
|  | Test Alarms - Inspect Steering Gear and connecting linkage |  |  |  |
|  | Check for oil leaks from pump glands. Grease all linkage points. Check linkages for wear |  |  |  |
|  | Operating instructions posted in Wheelhouse and S/G room |  |  |  |
|  | **Emergency fire pump** [MSC.1/Circ. 1432] |  |  |  |
|  | Ensure that fuel supply is adequate and heating system in satisfactory condition, if applicable - Lubricate all external moving parts |  |  |  |
|  | Check that suction valve operates freely and is properly lubricated |  |  |  |
|  | **Emergency batteries** |  |  |  |
|  | Check battery specific gravity readings - Battery tops & check that terminal connections are free of salts & well-greased. Check for tightness |  |  |  |
|  | Temporarily switch off battery charger and check battery supply voltage |  |  |  |
|  | **Explosimeters, O2 indicators, Toxicity check, Test tubes** |  |  |  |
|  | Check operation, condition of toxicity measurement instruments & test tubes |  |  |  |
|  | **Save-alls on deck:** Condition for corrosion, wastage. Plugs including chains to be in order |  |  |  |
|  | **PPE (as applicable for body, hand, feet and head-face protection)** |  |  |  |
|  | Check condition, availability and suitability |  |  |  |
|  | **Resuscitation Equipment** |  |  |  |
|  | Check for missing/damaged parts and Oxygen cylinder to be full |  |  |  |
|  | **Additional medical first aid for ships carrying toxic cargo** |  |  |  |
|  | Check condition, availability and suitability of antidotes & stretcher |  |  |  |
|  | **Decontamination showers and eye wash for ships carrying toxic cargo** |  |  |  |
|  | Check condition and ensure operation in all ambient conditions |  |  |  |
|  | Check proper marking and accessibility |  |  |  |
|  | **ECDIS (if used for navigation)** - Fan condition and operation |  |  |  |
|  | **Means of Embarkation/Disembarkation** (Gangways, accommodation ladders incl. winch, wires and fittings as well as use for pilot transfer) [SOLAS II, III, MSC.1/Circ. 1331] - Maintenance and inspection, as per form **M 048** |  |  |  |
|  | **Fixed Foam fire-extinguishing systems** [MSC.1/Circ. 1432] |  |  |  |
|  | Verify all control and section valves are in the proper open or closed position, and all pressure gauges are in the proper range |  |  |  |
|  | **Emergency bilge suction valve** - non-return valve can lift over its seat |  |  |  |

|  |
| --- |
| **COMMENTS:** |
|  |

Please sign in the following boxes for **each month** separately:

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **YEAR:** |  |

|  |
| --- |
| **QUARTERLY ROUTINES** |

Tick with the **appropriate marks** each box next to the maintenance routines indicating **the quarter of the year** (**1** for January-March, **2** for April-June, **3** for July-September, etc.) during which this inspection is carried out. Marks:

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

| **ITEM** | | **1** | **2** | **3** | **4** |
| --- | --- | --- | --- | --- | --- |
|  | **Visual safety signals (ALDIS, ALDIS with batteries, rescue headlight)** |  |  |  |  |
|  | Check position and condition of visual signals |  |  |  |  |
|  | ALDIS: Power from ship main and from rechargeable battery |  |  |  |  |
|  | **Audible safety signals (Bell, Whistle, Fog horn, Gong, Loudspeaker)** |  |  |  |  |
|  | Position and condition of audible signals |  |  |  |  |
|  | **Safety Signs (NUCs, anchoring signal, Max. draught signal, Cone, Diamond shape)** - position and condition of signs |  |  |  |  |
|  | **Light signals (Electric lights & Oil/battery lights)** |  |  |  |  |
|  | Check condition & availability of lamps, colour signs, light bulbs, etc. |  |  |  |  |
|  | **Lifeboats and rescue boats** |  |  |  |  |
|  | Renew fresh water |  |  |  |  |
|  | Check correct operation of engine and gear |  |  |  |  |
|  | Support Boat and take weight off the wires |  |  |  |  |
|  | Check the falls for broken wires - On-load release & hydrostatic lock system |  |  |  |  |
|  | Check lifeboats’ skates |  |  |  |  |
|  | Check sheave grooves; smooth any rough or sharp edges |  |  |  |  |
|  | **Lifeboat/Liferaft Embarkation Ladders** [SOLAS I, II, III, MSC.1/Circ. 1331] |  |  |  |  |
|  | Check overall condition. Check condition of Spreaders steps |  |  |  |  |
|  | Ladders to be spread and ropework and steps to be inspected. Repair or renew as necessary. Check securing arrangements |  |  |  |  |
|  | **SOLAS Training Manual** - in each crew mess room or 3 copies in public spaces |  |  |  |  |
|  | **Table for Life Saving Signals & Rescue Signs** - posted (Bridge, Lifeboats) |  |  |  |  |
|  | **Instructions/Notices and Muster List posted** |  |  |  |  |
|  | Check position and condition. Duties cards to be posted in every crew cabin |  |  |  |  |
|  | **Breathing Apparatus** |  |  |  |  |
|  | Gauge and capacity of air supply |  |  |  |  |
|  | Low Pressure Audible Alarm - Face Mask air supply and tightness |  |  |  |  |
|  | **Fire detection system** |  |  |  |  |
|  | Test/Means of test (blower, aerosol)/Non-destructive test instructions |  |  |  |  |
|  | Check for spares |  |  |  |  |
|  | **Fixed Fire Fighting system / Dry powder / Sprinkler system** |  |  |  |  |
|  | Ensure that all automatic (visual – audible) alarms for the firefighting / sprinkler systems are tested using the test valves for each section |  |  |  |  |
|  | Condition of installation/proper operation of all isolating valves |  |  |  |  |
|  | **Fire mains, fire pumps, hydrants, hoses and nozzles** [MSC.1/Circ. 1432] |  |  |  |  |
|  | Verify international shore connection(s) is/are in serviceable condition |  |  |  |  |
|  | **Foam Fire Extinguishing system** [MSC.1/Circ. 1432] |  |  |  |  |
|  | Verify proper quantity of foam concentrate in the foam system storage tank |  |  |  |  |
|  | **Ventilation systems and fire dampers** [MSC.1/Circ. 1432] |  |  |  |  |
|  | Test all fire dampers for local operation |  |  |  |  |
|  | **Fire doors** [MSC.1/Circ. 1432] |  |  |  |  |
|  | Test all fire doors located in main vertical zone bulkheads for local operation |  |  |  |  |
|  | **Fire Boxes & Firefighting equipment storage** |  |  |  |  |
|  | Ensure that lockers for firefighting equipment contain proper inventory and equipment is in proper condition (axes, valve wheel etc.) |  |  |  |  |
|  | Hydrants: Condition and operation |  |  |  |  |
|  | Check adequate number of fire boxes at each inspection |  |  |  |  |
|  | **Accommodation hoses** |  |  |  |  |
|  | Hoses to be in place & properly arranged. Hose lockers contain correct spanners for Hydrants/nozzles |  |  |  |  |
|  | Hoses, couplings and “O” rings to be checked under water pressure. Spare washers & “O” rings available |  |  |  |  |
|  | Fire hoses fit with Jet/Fog nozzles & spanners (clamps not permitted) |  |  |  |  |
|  | **CO2 bottles** - All CO2 bottle connections for cable operating system clips are checked for tightness on fixed fire-extinguishing installations |  |  |  |  |
|  | **Fire control plan** |  |  |  |  |
|  | Check number, position, condition of plans. Compare/check actual condition |  |  |  |  |
|  | **Main and Emergency steering gear** [SOLAS V] |  |  |  |  |
|  | Megger test steering gear electric motor |  |  |  |  |
|  | Operate emergency steering gear as per SOLAS instructions |  |  |  |  |
|  | **Emergency generator** |  |  |  |  |
|  | Grease and lubricate all external moving parts. |  |  |  |  |
|  | Check that all driving belts are free of fretting and tears. Any damage must be rectified immediately. Run under reasonable load (if possible) |  |  |  |  |
|  | Switch panel to be checked by electrician, also all connections to be checked for tightness and cleaned of any rust |  |  |  |  |
|  | **Emergency batteries / Battery room** |  |  |  |  |
|  | 70% Total discharge of batteries and then re-charge |  |  |  |  |
|  | **Hand held metal detectors** - Visual check, check battery expiry date |  |  |  |  |
|  | **Padlocks** - number, check proper operation |  |  |  |  |
|  | **Oil containment arrangement** |  |  |  |  |
|  | Pollution control equipment/Clean-off materials to be available |  |  |  |  |
|  | **Emergency towing system** |  |  |  |  |
|  | Check condition of the equipment/arrangements |  |  |  |  |
|  | **AIS** [SOLAS V] - Operational test |  |  |  |  |
|  | **Water Mist, Water Spray and Sprinkler Systems** [MSC.1/Circ. 1516] |  |  |  |  |
|  | Assess system water quality in header tank & pump unit vs. maker guidelines |  |  |  |  |
|  | **Fire Hoses, Nozzles, Hydrants, Mains, Pumps, Couplings, Spanners, International Shore Connections** [MSC.1/Circ. 1432] |  |  |  |  |
|  | Verify international shore connection(s) is in serviceable condition |  |  |  |  |

|  |
| --- |
| **COMMENTS:** |
|  |

Please sign in the following boxes for **each quarter** separately:

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **SSO** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **SSO** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **SSO** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **SSO** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **DATE:** |  |

|  |
| --- |
| **SEMI-YEARLY ROUTINES** |

Tick with the **appropriate marks** each box next to the maintenance routines indicating **the semester of the year** (**1** for January-June, **2** for July-December) during which this inspection is carried out. Marks:

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

| **ITEM** | | **1** | **2** |
| --- | --- | --- | --- |
|  | **Gyro Compass** - Speed and latitude corrections need to be applied. Where the gyro has no direct speed log or position input, manual corrections will have to be made as required |  |  |
|  | **Course recorder** - Check operation, timing equipment, tracking, course heading marker, spares (paper/pencils). Previous printouts identified for date/voyage |  |  |
|  | **Revolution indicator** - Check that it can be read from conning position, dimming light, remote loc. Indicator (bridge wings, E/R), pitch & operational mode indicator |  |  |
|  | **E /R logger** - Check printing quality, previous printouts identified for date/voyage, correct operation of timing device, spares |  |  |
|  | **Barograph** - Check operation, timing device, damping equipment, calibration label fitted, corrections provided, spares (paper/pencils) |  |  |
|  | **Sextants** - Check arc, scale, minute adjusting drum, mirrors, sun glass, error established, adjusting instruments/tools |  |  |
|  | **Lifeboat Hulls** - Inspect Hulls for damage & chaffing. Lifeboat hulls marked with Length, Breath, Depth, Number of Persons, Ship’s Name and Port of Registry |  |  |
|  | **Lifeboat Lifting Hooks, LRRS/FPD and Winch** |  |  |
|  | Condition of Lifting Hooks, Lifeboat Retrieval & Release Systems (LRRS) / Fall Preventing Devices (as applicable and available) (clean, free of rust/paint etc.) |  |  |
|  | Lifting Hook Secreting Bolds at keel for corrosion. Scale/paint if necessary |  |  |
|  | Brake Housing and Clutch for moisture/condensation. Air Driven Winch (see Maker’s manual) |  |  |
|  | Ensure that airline filter is clean. Wash with kerosene |  |  |
|  | Fill oil chamber in line oiler as necessary |  |  |
|  | Apply grease as necessary |  |  |
|  | **Lifeboat Equipment** [SOLAS III] |  |  |
|  | Availability of all items included in the L/B inventory |  |  |
|  | All wire and rope work to be inspected and renewed as required |  |  |
|  | Lockers to be checked for water-tightness and defects |  |  |
|  | Lockers & tanks to be marked: FOOD, WATER (with quantity in liters), SMALL GEAR, FUEL |  |  |
|  | All provisions to be in good condition - check pyrotechnics condition and expiry date |  |  |
|  | Rig exposure cover frame, spreader and cover. Ensure sufficient lashing fitted, cover must be clean and dry |  |  |
|  | **Liferafts** [SOLAS III] |  |  |
|  | Lashings & painters in good condition & firmly secured to ship using weak link arrangements |  |  |
|  | Container not to be damaged & stowed with painter outlet facing Aft and drain holes at bottom |  |  |
|  | Liferafts’ containers (marking with ship’s name, port of registry and service dates) |  |  |
|  | Condition and location of embarkation light and boarding line for Fwd Liferaft, when carried |  |  |
|  | Check ship’s side removable guardrail sections to be free to release |  |  |
|  | Retro-reflective tapes: (Tapes fitted around the canopy of the raft at suitable intervals (approx. 50 cm) and at a suitable height above water line. On inflatable liferafts tapes should also fitted on the underside of floor (4 tapes fitted at equal intervals around the outer edges on bottom of liferafts). Tapes sufficiently wide & long (approxim. 5 x 30 cm). A suitable cross-shaped marking of two such tapes should also be applied to the top of canopy. In rafts, which are not equipped with canopies at least 4 such tapes should be attached to end evenly spaced on the buoyancy chamber in such a manner that they are visible both from air & sea) |  |  |
|  | **Bridge Pyrotechnics, Man overboard Signals and Line Throwing Apparatus** |  |  |
|  | Inspect all lifebuoys for damage or deterioration and replace where necessary |  |  |
|  | Mark again the Ship’s name and Port of Registry where necessary |  |  |
|  | **Lifebuoys:** Retro-reflective tapes of a sufficient width (approximately 5 cm) should be applied around or on both sides of the body of the buoy at 4 evenly spaced points. **Buoyant Apparatus:** Buoyant apparatus should be fitted with retro-reflective tapes in the same manner as rafts without canopies, always depending on the size and shape of the object. The reflectors should be visible from both the air and the sea |  |  |
|  | Check self-igniting lights and buoyant lines to be in good condition. Renew where necessary |  |  |
|  | Check that Man Overboard Lifebuoys are free to operate and have the correct weight |  |  |
|  | **Spare Lifesaving and Fire-fighting Equipment** - check spare equipment, requisitions for items required to maintain the recommended stock to be carried onboard |  |  |
|  | **Personal Protective Equipment** |  |  |
|  | Check availability and position of stowage - check for missing/damaged parts, expiry dates |  |  |
|  | **Watertight, weathertight, gastight fire doors -** Fire doors: Gas tight, self-closing system/no holdback hooks, hold back arrangements /remote release devices fail-safe type |  |  |
|  | Check condition and operation |  |  |
|  | **Steering gear** [SOLAS V] |  |  |
|  | Open up and clean oil filters - examine filter for traces of metal fines |  |  |
|  | Land oil samples for analysis |  |  |

| **COMMENTS:** |
| --- |
|  |

Please sign in the following boxes for **each semester** separately:

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **DATE:** |  |

|  |
| --- |
| **ANNUAL ROUTINES** |

Tick with the **appropriate marks** each box next to the maintenance routines. Marks

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

|  |  |  |
| --- | --- | --- |
| **ITEM** | | |
|  | **Magnetic Compass** (by external workshop) - General condition, deviation card by external workshop |  |
|  | **Gyro Compass** (by external workshop) - Inspection & maintenance by external workshop |  |
|  | **Plotting equipment** - Check operation, sheets, pencil, reflective plotter |  |
|  | **GMDSS installation** (by external workshop) - Check if correct MMSI is programmed in DSC controller |  |
|  | **EPIRB** (by external workshop) [MSC.1/Circ. 1040, MSC.1/Circ 1039, SOLAS IV] |  |
|  | Check position and mounting for float free operation |  |
|  | Verify the presence of a firmly attached lanyard in good condition; ensure the lanyard is neatly stowed and not tied to the ship or the mounting bracket |  |
|  | Check for EPIRB ID (15 Hex ID and other required info) clearly marked on the outside of equipment |  |
|  | Check expiry date of shore-based maintenance contract |  |
|  | Verify the presence of beacon operating instructions |  |
|  | **Ship Security Alert System (SSAS)** (by external workshop) |  |
|  | General condition, test |  |
|  | **Lifeboats, Lifeboats with self-contained air support system, Lifeboats with sprinkler system** (by external workshop) [MSC.1/Circ. 1206] |  |
|  | Annual thorough examination as per MSC Circ.1206 |  |
|  | External inspection of air cylinders |  |
|  | **Lifeboat Falls** [SOLAS III, MSC.1/Circ. 1206] |  |
|  | Falls used in launching shall be renewed when necessary due to deterioration of the falls or intervals of not more than 5 years, whichever is the earliest |  |
|  | Verify that all falls are in good condition and the date for renewing (special concern for hidden areas and areas of end terminations) |  |
|  | **Lifeboat Engines** (see Maker’s manual) |  |
|  | Clean or renew as necessary all air/oil/lubricating oil filters and filter elements |  |
|  | Drain, flush out systems, renew with correct grades of oil as necessary |  |
|  | Check Fuel injection nozzles if exhaust is dirty |  |
|  | Check injector timing and pressure as necessary |  |
|  | **Lifeboat Releasing gear** (by external workshop) [SOLAS III, MSC.1/Circ. 1206] |  |
|  | Dynamic winch brake test requires to be carried out annually preferably with the empty life boat |  |
|  | Annual thorough examination as per MSC Circ.1026 |  |
|  | On-load release gear/automatic release hooks thorough examination and operational test incl. free-fall lifeboat release system |  |
|  | **Lifeboat Davit Winches** (by external workshop) |  |
|  | Examine davit structure, in particular with regard damages such as kinks and corrosion |  |
|  | Ensure that davit locking pins (harbor pins) are fitted and boat secured |  |
|  | **Liferafts** (by external workshop) [SOLAS III] |  |
|  | Liferafts and Hydrostatic release gear required to be landed annually for servicing |  |
|  | **Breathing Apparatus** (by external workshop) [MSC.1/Circ. 1432, BCH Code, IBC Code, IGC Code] |  |
|  | Check air recharging system for air quality (if fitted) |  |
|  | Check all breathing apparatus face masks and air demand valves are in serviceable condition |  |
|  | Check compressed air & O2 breathing cylinders |  |
|  | Consider any additional SCBA checks according to maker's instructions |  |
|  | **Emergency Escape Breathing Devices (EEBDs)** (by external workshop) [MSC.1/Circ. 1432] *.*  *[1] Hydrostatic pressure testing shall be considered to be carried out at the intervals specified by the maker at a shore-based testing facility and records of pressure tests are to be maintained* |  |
|  | Check all units as per maker’s instruction. Maintain records of inspections and maintenance |  |
|  | **Hydrostatic Pressure Test** Hydrostatic pressure testing shall be carried out at the intervals specified by the maker at a shore-based testing facility and records of pressure tests are to be maintained |  |
|  | **Resuscitation Equipment** (by external workshop) |  |
|  | All parts & O2 cylinder must be checked according to Maker’s book |  |
|  | **Fixed Gas / CO2 Fire Extinguishing System** (by external workshop) [MSC.1/Circ. 1432, MSC.1/Circ. 1318] - Visually inspect all accessible components for proper condition |  |
|  | Externally examine all high-pressure cylinders for evidence of damage or corrosion. Cylinders that are leaking, corroded, dented or bulging should be hydrostatically retested or replaced |  |
|  | Check the hydrostatic test date of all storage containers |  |
|  | Functionally test all fixed system audible and visual alarms |  |
|  | Verify all control/section valves are in the correct position |  |
|  | Check the connections of all pilot release piping and tubing for tightness |  |
|  | Examine all flexible hoses in accordance with maker’s recommendations |  |
|  | Test all fuel shut-off controls connected to fire-protection systems for proper operation |  |
|  | The boundaries of the protected space should be visually inspected to confirm that no modifications have been made to the enclosures that have created uncloseable openings that would render the system ineffective |  |
|  | Visually inspect all storage containers for any signs of damage, rust or loose mounting hardware. |  |
|  | Hydrostatically retest or replace cylinders that are leaking, corroded, dented or bulging |  |
|  | Visually inspect the system piping to check for damage, loose supports and corrosion |  |
|  | Inspect nozzles to ensure they have not been obstructed by the storage of spare parts or a new installation of structure or machinery (perform the test by isolating the discharge piping from the system  and blowing dry air or nitrogen from test cylinders or suitable means through the piping) |  |
|  | Inspect the manifold to verify that all flexible discharge hoses and fittings are properly tightened |  |
|  | Verify that all entrance doors to the protected space are close properly and have warning signs, which indicate that the space is protected by a fixed carbon dioxide system and that personnel should evacuate immediately if the alarms sound |  |
|  | Check all remote releasing controls for clear operating instructions & indication as to the space served |  |
|  | If cylinders are installed inside the protected space, verify the integrity of the double release lines inside the protected space, and check low pressure or circuit integrity monitors on release cabinet, as applicable |  |
|  | **Fixed Foam Fire Extinguishing System** [MSC.1/Circ. 1432] |  |
|  | Visually inspect all accessible components for proper condition |  |
|  | Functionally test all fixed system audible and visual alarms |  |
|  | Flow test all water supply and foam pumps for proper pressure and capacity, and confirm flow at the required pressure in each section (Ensure all piping is thoroughly flushed with fresh water after service) |  |
|  | Test all system cross connections to other sources of water supply for proper operation |  |
|  | Verify all pump relief valves, if provided, are properly set |  |
|  | Examine all filters/strainers to verify they are free of debris and contamination |  |
|  | Verify all control/section valves are in the correct position |  |
|  | Blow dry compressed air or nitrogen through the discharge piping or otherwise confirm the pipework and nozzles of high expansion foam systems are clear of any obstructions, debris and contamination. This may require the removal of nozzles, if applicable |  |
|  | By External Workshop: Take samples from all foam concentrates and subject them to periodical control tests in MSC.1/Circ.1312, for low expansion foam, or MSC/Circ.670 for high expansion foam.   |  |  | | --- | --- | |  | ***Note*** |   *Except for non-alcohol resistant foam, the first test need not be conducted until 3 years after being supplied to the ship.* |  |
|  | Test all fuel shut-off controls connected to fire-protection systems for proper operation |  |
|  | **Fixed Dry Chemical Powder Fire Extinguishing System** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | Visually inspect all accessible components for proper condition |  |
|  | Verify the pressure regulators are in proper order and within calibration |  |
|  | Agitate the dry chemical powder charge with nitrogen in accordance with maker’s instructions.   |  |  | | --- | --- | |  | ***Note*** |   Due to powder's affinity for moisture, any nitrogen gas introduced for agitation must be moisture free. |  |
|  | **Fixed Aerosol Extinguishing System** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | Verify condensed or dispersed aerosol generators have not exceeded their mandatory replacement date. Pneumatic or electric actuators should be demonstrated working, as far as practicable |  |
|  | **Portable Foam Applicators** [MSC.1/Circ. 1432] - operating instructions are in place and legible |  |
|  | Verify all portable foam applicators are set to the correct proportioning ratio for the foam concentrate supplied and the equipment is in proper order |  |
|  | Verify all portable containers or portable tanks containing foam concentrate remain factory sealed, and the maker’s recommended service life interval has not been exceeded |  |
|  | Portable containers or portable tanks containing foam concentrate, excluding protein-based concentrates, less than 10 years old, that remain factory sealed can normally be accepted without the periodical foam control tests required in MSC.1/Circ.1312 being carried out |  |
|  | Protein based foam concentrate portable containers and portable tanks should be thoroughly checked and, if more than five years old, the foam concentrate should be subjected to the periodical foam control tests required in MSC.1/Circ.1312, or renewed |  |
|  | The foam concentrates of any non-sealed portable containers and portable tanks, and portable containers and portable tanks where production data is not documented, should be subjected to the periodical foam control tests required in MSC.1/Circ.1312 |  |
|  | Check to see if the extinguisher may have been operated |  |
|  | Where fitted, check to see that pressure is within limits. Check that dust covers on pressure indicating devices and relief valves are in place |  |
|  | Inspect for corrosion, dents or damage which may affect the safe operation of the extinguisher |  |
|  | Weigh the extinguisher and check the mass compared to the fully charged extinguisher |  |
|  | Check that hoses and nozzles are clear and undamaged |  |
|  | **Extra inspection requirements at recharge (when applicable):** |  |
|  | Remove the charge to a clean container if to be reused and check if it is still suitable for further use. Check any charge container (Water and foam charges) |  |
|  | Examine the powder for reuse. Ensure that it is free flowing and that there is no evidence of caking lumps or foreign bodies (Powder charges) |  |
|  | Examine for damage and corrosion. Gas cartridge |  |
|  | **Wheeled (mobile) fire extinguishers** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | Perform inspections in accordance with the maker’s instructions for periodical inspections |  |
|  | Visually inspect all accessible components for proper condition |  |
|  | Check the hydrostatic test date of each cylinder |  |
|  | For dry powder extinguishers, invert extinguisher to ensure powder is agitated |  |
|  | Check to see if the extinguisher may have been operated |  |
|  | Where fitted, check to see that pressure is within limits. Check that dust covers on pressure indicating devices and relief valves are in place |  |
|  | Inspect for corrosion, dents or damage which may affect the safe operation of the extinguisher |  |
|  | Weigh the extinguisher and check the mass compared to the fully charged extinguisher |  |
|  | Check that hoses and nozzles are clear and undamaged |  |
|  | Check that the operating instructions are in place and legible |  |
|  | **Extra inspection requirements at recharge (when applicable):** |  |
|  | Remove the charge to a clean container if to be reused and check if it is still suitable for further use. Check any charge container (Water and foam charges) |  |
|  | Examine the powder for reuse. Ensure that it is free flowing and that there is no evidence of caking lumps or foreign bodies (Powder charges) |  |
|  | Examine for damage and corrosion. Gas cartridge |  |
|  | **Galley and deep fat cooking fire-extinguishing systems** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | Check galley & deep fat cooking fire-extinguishing systems in accordance with the maker's instructions |  |
|  | Check to see if the extinguisher may have been operated |  |
|  | Where fitted, check to see that the pressure is within limits. Check that dust covers on pressure indicating devices and relief valves are in place |  |
|  | Inspect for corrosion, dents or damage which may affect the safe operation of the extinguisher |  |
|  | Weigh the extinguisher and check the mass compared to the fully charged extinguisher |  |
|  | Check that hoses and nozzles are clear and undamaged |  |
|  | Check that the operating instructions are in place and legible |  |
|  | **Extra inspection requirements at recharge (when applicable):** |  |
|  | Remove the charge to a clean container if to be reused and check if it is still suitable for further use. Check any charge container (Water and foam charges) |  |
|  | Examine the powder for reuse. Ensure that it is free flowing and that there is no evidence of caking lumps or foreign bodies (Powder charges) |  |
|  | Examine for damage and corrosion. Gas cartridge |  |
|  | **Other Portable Fire extinguishers** (by external workshop) [Res. A. 951(23)] |  |
|  | Check all fire extinguishers for proper location, charging pressure and condition |  |
|  | Check to see if the extinguisher may have been operated |  |
|  | Where fitted, check to see that the pressure is within limits. Check that dust covers on pressure indicating devices and relief valves are in place |  |
|  | Inspect for corrosion, dents or damage which may affect the safe operation of the extinguisher |  |
|  | Weigh the extinguisher and check the mass compared to the fully charged extinguisher |  |
|  | Check that hoses and nozzles are clear and undamaged |  |
|  | Check that the operating instructions are in place and legible |  |
|  | **Extra inspection requirements at recharge (when applicable):** |  |
|  | Remove the charge to a clean container if to be reused and check if it is still suitable for further use. Check any charge container (Water and foam charges) |  |
|  | Examine the powder for reuse. Ensure that it is free flowing and that there is no evidence of caking lumps or foreign bodies (Powder charges) |  |
|  | Examine for damage and corrosion. Gas cartridge |  |
|  | **Other fixed firefighting systems (Water mist, water spray and sprinkler systems)** (by external workshop) [MSC.1/Circ. 1516] |  |
|  | Verify proper operation of all water mist, water-spray and sprinkler systems using the test valves for each section |  |
|  | Visually inspect all accessible components for proper condition |  |
|  | Externally examine all high-pressure cylinders for evidence of damage or corrosion |  |
|  | Check the hydrostatic test date of all high-pressure cylinders |  |
|  | Functionally test all fixed system audible and visual alarms |  |
|  | Flow test all pumps for proper pressure and capacity |  |
|  | Test all antifreeze systems for adequate freeze protection |  |
|  | Test all system cross connections to other sources of water supply for proper operation |  |
|  | Verify all pump relief valves, if provided, are properly set |  |
|  | Examine all filters/strainers to verify they are free of debris and contamination |  |
|  | Verify all control/section valves are in the correct position |  |
|  | Blow dry compressed air or nitrogen through the discharge piping of dry pipe systems, or otherwise confirm the pipework and nozzles are clear of obstructions. This may require the removal of nozzles, if applicable |  |
|  | Test emergency power supply switchover, where applicable |  |
|  | Visually inspect all sprinklers focusing in areas where sprinklers are subject to aggressive atmosphere (like saunas, spas, kitchen areas) and subject to physical damage (like luggage handling areas, gyms, play rooms, etc.) so all sprinklers are inspected within 1 year. Sprinklers with obvious external damage, including paint, to be replaced and not included in the number of sprinklers tested in subpara. 24.q. |  |
|  | Check for any changes that may affect the system such as obstructions by ventilation ducts, pipes, etc. |  |
|  | Test a minimum of one section in each open head water mist system by flowing water through the nozzles. The sections tested should be chosen so that all sections are tested within a five-year period. |  |
|  | Test automatic sprinklers and automatic water mist nozzles for proper operation in accordance with the flow charts appended as **Appendix I** at the end of the present annual routines |  |
|  | During basic testing, and extended testing when applicable, of automatic sprinkler heads/nozzles as outlined in subpara. 24.q, water quality testing to be conducted in each corresponding piping section.   |  |  | | --- | --- | |  | ***Note*** |   *Should a tested sprinkler fail, assessing the corresponding water quality at that time would assist in determining the cause of failure.* |  |
|  | **Fire mains, fire pumps (including Emergency fire pump), hydrants, fire hoses and nozzles** [MSC.1/Circ. 1432] - Visually inspect all accessible components for proper condition |  |
|  | Check all fire hydrants for operation - ensure that nozzle size/type are correct, maintained and working |  |
|  | Pressure test a sample of fire hoses at the maximum fire main pressure, so that all fire hoses are tested within 5 years |  |
|  | Flow test all fire pumps for proper pressure and capacity. Test em. fire pump with isolation valves closed |  |
|  | Test all hydrant valves for proper operation |  |
|  | Verify all fire pump relief valves, if provided, are properly set |  |
|  | Examine all filters/strainers to verify they are free of debris and contamination |  |
|  | **Fixed fire detection and alarm system** [MSC.1/Circ. 1432] |  |
|  | Test all fire detection systems and fire detection systems used to automatically release fire-extinguishing systems for proper operation, as appropriate |  |
|  | Visually inspect all accessible detectors for evidence of tampering obstruction, etc., so that all detectors are inspected within one year |  |
|  | Test emergency power supply switchover |  |
|  | **Ventilation systems and fire dampers** [MSC.1/Circ. 1432] |  |
|  | Test all fire dampers for remote operation |  |
|  | Verify galley exhaust ducts and filters are free of grease build-up |  |
|  | Test all ventilation controls interconnected with fire-protection systems for proper operation |  |
|  | **Fire doors** [MSC.1/Circ. 1432] - Test all remotely controlled fire doors for proper release |  |
|  | **Emergency generator** - Perform full load test |  |
|  | Change the oil of the sump tank and the oil filter |  |
|  | **Explosimeters, O2 indicators** (by external workshop) |  |
|  | Maintenance, Calibration, Certification by authorized workshop |  |
|  | **VDR** (by external workshop) [SOLAS V] - Performance test by authorized workshop |  |
|  | **Immersion Suits/Anti-Exposure Suits/Thermal Protective Aids (more than 10 years of age)** |  |
|  | Air pressure test by suitable shore-based facility or alternatively onboard, provided that suitable testing equipment is available |  |
|  | **Inflatable liferafts** (by external workshop), **lifejackets** [SOLAS III] - Operational test/maintenance |  |
|  | **Hydrostatic release units** (non-disposable) [SOLAS III] - Maintenance |  |
|  | **AIS** [SOLAS V] - Operational test |  |
|  | **Long Range Identification & Tracking System (LRIT)** [SOLAS V, MSC.1/Circ. 1307] - Operational test |  |
|  | **Radio** [SOLAS IV] - Check radio battery |  |
|  | **Means of Embarkation on and Disembarkation from ships** (Gangways, accommodation ladders incl. winch and fittings as well as use for pilot transfer) [SOLAS II, MSC.1/Circ. 1331] |  |
|  | Annual thorough examination. |  |
|  | **Fixed local-application fire-extinguishing system (for Category A Engine Rooms)** [MSC.1/Circ. 913] |  |
|  | Full flow test of minimum one section and spot check of fire detection/automatic release system (test at least one section each year with full flow through the nozzle – choose sections to test so that all  sections are tested within a five-year period). |  |

|  |  |  |
| --- | --- | --- |
| 40. | **Fall Protection Devices** – According to manufacturer’s instructions |  |
| 41. | **Means of Access** – Ensure that all tanks’ means of access, as addressed in Ship Structure Access Manual, have been inspected during the planned holds’, tanks’ and void spaces’ annual inspections.  Records of these inspections shall be maintained in Part II of the Ship Structure Access Manual, as well as in the respective sections of tanks’ inspection reports. |  |

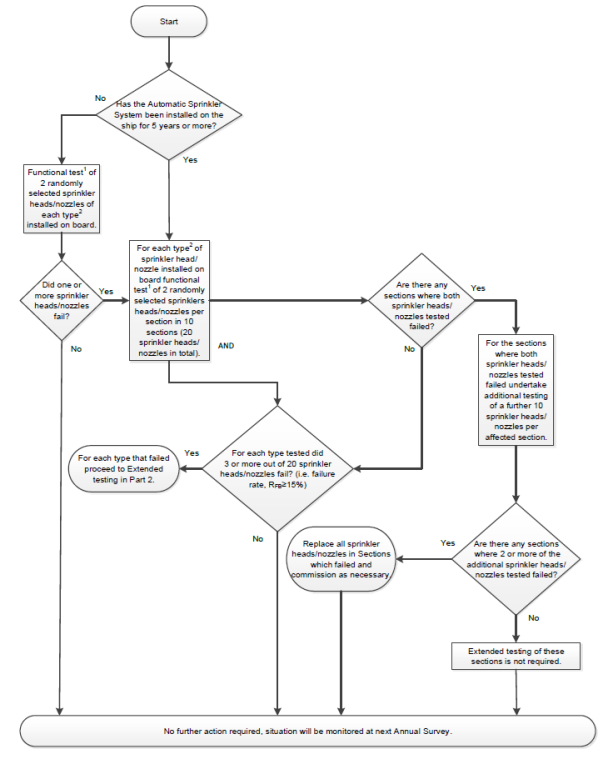
|  |  |
| --- | --- |
|  | ***Note*** |

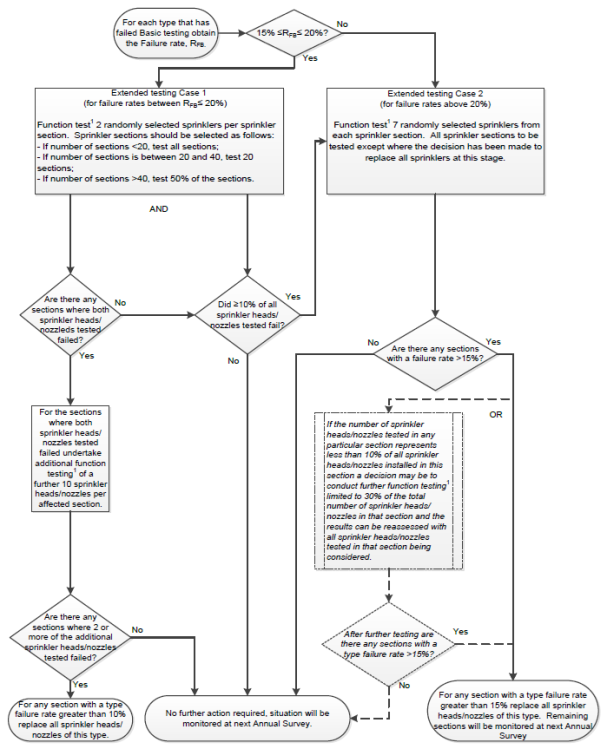
1. *Annual servicing and inspection of all permanently-pressurized portable extinguishers shall be always carried out at a shore servicing facility.*
2. *Restrictively to extinguishers of the non-permanently pressurized type, service and inspection may be carried out by a ship’s officer, taking in account the* maker’s *instructions.*

|  |
| --- |
| **COMMENTS:** |
|  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **SSO** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

**Appendix I**

**Part 1 - Basic Testing**

**Part 2 - Extended Testing**

|  |  |
| --- | --- |
|  | ***Note*** |

*to Flow charts Part 1 – Basic Testing and Part 2 – Extended Testing*

1. *Functional Test: is a test that demonstrates the operation and flow of water from sprinkler head/nozzle.*
2. *Type is defined as each different* maker *model of sprinkler head/nozzle.*
3. *Static/standby pressure: is the constant pressure maintained in the system at all times prior to activation.*
4. *All testing should be carried out at static/standby pressure.*
5. *Failure rate (RFB) is the number of sprinkler heads/nozzles to fail testing divided by test sample size multiplied by 100.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **DATE:** |  |

|  |
| --- |
| **TWO YEARLY ROUTINES** |

Tick with the **appropriate marks** each box next to the maintenance routines. Marks

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

|  |  |  |
| --- | --- | --- |
| **ITEM** | | |
|  | **Fixed Gas / CO2 Fire Extinguishing System** (by external workshop) [MSC.1/Circ. 1432] |  | |
|  | Weigh all high-pressure extinguishing agents cylinders and pilot cylinders or have their contents verified by other reliable means to confirm that the available charge in each is above 95% of the nominal charge. Cylinders containing less than 95% of the nominal charge should be refilled |  | |
|  | Blow dry compressed air or nitrogen through the discharge piping or otherwise confirm the pipe work and nozzles are clear of any obstructions. This may require the removal of nozzles, if applicable |  | |
|  | Test and verify that the discharge piping and nozzles that they are not blocked. The test should be performed by isolating the discharge piping from the system and flowing dry air or nitrogen from test cylinders or suitable means through the piping |  | |
|  | Check the hydrostatic test date of all storage containers |  | |
|  | **Fixed Dry Chemical Powder Fire Extinguishing System** (by external workshop) [MSC.1/Circ. 1432, Rules I-0 Sect. 3] |  | |
|  | Blow dry nitrogen through the discharge piping to confirm that the pipe work and nozzles are clear of any obstructions |  | |
|  | Operationally test local and remote controls and section valves |  | |
|  | Verify the contents of propellant gas cylinders (including remote operating stations) |  | |
|  | Test a sample of dry chemical powder for moisture content |  | |
|  | Subject the powder containment ship, safety valve and discharge hoses to a full working pressure test. \**Hydrostatic test may be dispensed with, provided that their internal inspection does not reveal any deficiencies* |  | |
|  | **Water mist, water spray and sprinkler systems** (by external workshop) [Rules I-0 Sect. 3] |  | |
|  | Maintenance by approved service supplier \**Water-spraying systems supplied from the fire main and consisting solely of an isolating valve and open nozzles are exempted from this requirement (e.g., for paint store)* |  | |
|  | **Alternative gas fire-extinguishing systems** (by external workshop) [MSC.1/Circ. 1432, Rules I-0 Sect. 3] |  | |
|  | Maintenance by approved service supplier |  | |
|  | All high-pressure extinguishing agents cylinders and pilot cylinders shall be weighted or have their contents verified by other reliable means to confirm that the available charge in each is above 95 % of the nominal charge. Cylinders containing less than 95 per cent of the nominal charge shall be refilled |  | |
|  | Blow dry compressed air or nitrogen through the discharge piping or otherwise confirm the pipe work and nozzles are clear of any obstructions. This may require the removal of nozzles, if applicable |  | |
|  | **Aerosol fire-extinguishing systems** (by external workshop) [ Rules I-0 Sect. 3] |  | |
|  | Maintenance by approved service supplier |  | |
|  | **Foam fire-extinguishing systems** (by external workshop) [ Rules I-0 Sect. 3] |  | |
|  | Maintenance by approved service supplier |  | |
|  | **Galley and deep fat cooking fire-extinguishing systems** (by external workshop) [Rules I-0 Sect. 3] |  | |
|  | Maintenance by approved service supplier |  | |

|  |
| --- |
| **COMMENTS:** |
|  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **SSO** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **DATE:** |  |

|  |
| --- |
| **ROUTINES DURING INTERMEDIATE OR RENEWAL SURVEY** |

Tick with the **appropriate marks** each box next to the maintenance routines. Marks

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

|  |  |  |
| --- | --- | --- |
| **ITEM** | | |
|  | **Fixed CO2 Extinguishing Systems** [MSC.1/Circ. 1318] (1) Refer to Service Chart. |  |
|  | Weigh all high-pressure extinguishing agents cylinders and pilot cylinders or have their contents verified by other reliable means to confirm that the available charge in each is above 95 % of nominal charge |  |
|  | Check the hydrostatic test date of all storage containers |  |
|  | Test/verify that discharge piping & nozzles are not blocked. Perform test by isolating the discharge piping from system & flowing dry air or nitrogen from test cylinders or suitable means through the piping |  |
|  | **Fixed CO2 Extinguishing Systems** [MSC.1/Circ. 1432, Rules I-0 Sect. 3] *(2) By service technicians/specialists* |  |
|  | Where possible remove from the cylinder valves and test all activating heads for correct functioning by applying full working pressure through the pilot lines |  |
|  | In cases where the above is not possible, disconnect pilot lines from cylinder valves, blank off or connect together and test with full working pressure from the release station and check for leakage |  |
|  | Clean/adjust all cable components as necessary, and tighten the cable connectors. If the remote release controls are operated by pneumatic pressure, check the tubing for leakage, and verify proper charge of the remote releasing station pilot gas cylinders. All controls and warning devices should function normally, and time delay, if fitted, must prevent the discharge of gas for the required time period |  |
|  | After completion of work, return system to service. Verify all releasing controls are in proper position and connected to correct control valves. Reset all pressure switch interlocks and return to service. All stop valves should be in the closed position |  |
|  | **Immersion Suits/Anti-Exposure Suits/Thermal Protective Aids (less than 10 years of age)** *(3) For age in excess of ten years, refer to yearly routines* |  |
|  | Air pressure test by suitable shore facility or by ship’s suitable testing equipment if available |  |

|  |
| --- |
| **COMMENTS:** |
|  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **SSO** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **DATE:** |  |

|  |
| --- |
| **FIVE YEARLY ROUTINES** |

Tick with the **appropriate marks** each box next to the maintenance routines. Marks

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

|  |  |  |
| --- | --- | --- |
| **ITEM** | | |
|  | **Breathing apparatus** (by external workshop) [MSC.1/Circ. 1432] *[1] Aluminum and composite cylinders should be tested at an approved shore-based servicing station at the intervals and the test pressure stipulated by the maker and/or Recognized Organization* |  |
|  | Perform hydrostatic testing of all steel self-contained breathing apparatus cylinders. Test aluminum and composite cylinders to the satisfaction of the Administration by the maker and/or competent contractor |  |
|  | **Fixed gas fire extinguishing system (all types)** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | All control valves to be internally inspected |  |
|  | **Foam fire extinguishing system** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | All control valves to be internally inspected |  |
|  | Flush all high expansion foam system piping with fresh water, drain and purge with air |  |
|  | Check all nozzles to prove they are clear of debris |  |
|  | Test all foam proportioners or other foam mixing devices to confirm that the mixing ratio tolerance is within +30 to -10% of the nominal mixing ratio defined by the system approval |  |
|  | **Water mist, water spray and sprinkler systems** (by external workshop) [MSC.1/Circ. 1516] |  |
|  | Flush all ro-ro deck deluge system piping with water, drain and purge with air |  |
|  | Perform internal inspection of all control/section valves |  |
|  | Water quality testing should be conducted in all corresponding piping sections, if not previously tested as outlined in the Annual Testing and Inspections within the last 5 years |  |
|  | Condition of any batteries, or renew in accordance with maker’s recommendations |  |
|  | Perform internal examination of water pressure cylinders |  |
|  | Maintenance by approved service supplier |  |
|  | For each section where the water is refilled after being drained or flushed, water quality should meet maker’s guidelines. Testing of the renewed water quality should be conducted and recorded as a new baseline reference to assist future water quality monitoring for each corresponding section |  |
|  | **Wheeled (mobile) fire extinguishers** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | Visually examine at least 1 extinguisher of each type manufactured in the same year and kept onboard |  |
|  | All fire extinguishers together with propellant cartridges shall by hydraulically tested in accordance with the recognized standard or the maker’s instructions |  |
|  | **Extra inspection requirements after discharge test (when applicable):** |  |
|  | Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check the operating and discharge control. Clean and lubricate as required |  |
|  | Check that the safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable)** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |
|  | **Portable Foam Applicators** [MSC.1/Circ. 1432] |  |
|  | Visually examine at least 1 extinguisher of each type manufactured in the same year and kept onboard |  |
|  | **Extra inspection requirements after discharge test (when applicable)** |  |
|  | Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check the operating and discharge control. Clean and lubricate as required |  |
|  | Check that the safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable)** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |
|  | **Galley and deep fat cooking fire-extinguishing systems** (by external workshop) [MSC.1/Circ. 1432, Rules I-0 Sect. 3] |  |
|  | Visually examine at least 1 extinguisher of each type manufactured in the same year and kept onboard |  |
|  | **Extra inspection requirements after discharge test (when applicable)** |  |
|  | Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check operating and discharge control. Clean and lubricate as required |  |
|  | Check that the safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms, if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable)** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |
|  | **Other Portable Fire extinguishers** (by external workshop) [Res. A. 951(23)] |  |
|  | Visually examine at least 1 extinguisher of each type manufactured in the same year and kept onboard |  |
|  | At least one extinguisher of each type manufactured in the same year and kept onboard to be test discharged as a part of a fire drill |  |
|  | **Extra inspection requirements after discharge test (when applicable)** |  |
|  | Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check the operating and discharge control. Clean and lubricate as required |  |
|  | Check that the safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms, if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable)** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |
|  | **Low-location lighting** [MSC.1/Circ. 1432, Res. A. 752] |  |
|  | Test the luminance of all systems in accordance with the procedures in resolution A.752(18) |  |
|  | **Steering gear** [SOLAS V] - General inspection - Open up for class survey and carry out measures for wear-down of steering according to maker’s recommendations. On completion to be thoroughly tested |  |
|  | **Emergency fire pump** [MSC.1/Circ. 1432] |  |
|  | Prime mover (motor) to be dismantled and cleaned, dried and newly varnished. Then MEGGER tested |  |
|  | Pump to be stripped and completely overhauled |  |
|  | Ballast bearing housing to be inspected |  |
|  | Wear rings and impeller to be checked for wear or damage - New bearings to be fitted |  |
|  | Gland packing to be renewed or mechanical seal to be inspected and replaced, in necessary |  |
|  | On completion, pump to be tested |  |
|  | **Emergency generator -** engine to be stripped down completely and overhauled, if required. After re-assembly, generator to be tested including instrumentation and safety devices |  |
|  | **Rescue boat & Life boat Load Testing** (by external workshop) [SOLAS III, MSC.1/Circ. 1206] |  |
|  | Rescue boats and lifeboats shall be turned out and lowered when loaded with weights to simulate 1.1 times the total mass of the lifeboat when loaded with its full complement of persons and equipment |  |
|  | The winch brake shall be tested to withstand a static test with a proof load of not less than 1.5 times the maximum working load; and a dynamic test with a proof load of not less than 1.1 times the maximum working load at maximum lowering speed |  |
|  | **Lifeboat Releasing gear, Lifeboats with self-contained air support system** (by external workshop) [SOLAS III, MSC.1/Circ. 1206] |  |
|  | Operational test under a load of 1.1 times the total mass of the lifeboat when loaded with its full complement of persons and equipment |  |
|  | Fall preventing device (if fitted) to be load tested under a load of 1,5 times the total mass of the lifeboat when loaded with its full complement of persons and equipment |  |
|  | Hydrostatic test of air cylinders |  |
|  | **Lifeboat Falls** (by external workshop) [SOLAS III] |  |
|  | Falls used in launching shall be renewed after 5 years from their rigging if not earlier due to deterioration |  |
|  | **EPIRB** (by external workshop) [MSC.1/Circ. 1040, MSC.1/Circ 1039, SOLAS IV] *Certificate of* *Compliance shall be issued* |  |
|  | Check position and mounting for float free operation |  |
|  | Verify the presence of a firmly attached lanyard in good condition; ensure the lanyard is neatly stowed and not tied to the ship or the mounting bracket |  |
|  | Check for EPIRB ID (15 Hex ID & other required information) marked on the outside of equipment |  |
|  | Check expiry date of shore-based maintenance contract |  |
|  | Verify the presence of beacon operating instructions |  |
|  | **Fixed Gas / CO2 Fire Extinguishing System** (by external workshop) [MSC.1/Circ. 1318] (1) Maintenance should be carried out by technicians from a certified Service Supplier |  |
|  | Where possible, remove all activating heads from cylinder valves & test for correct functioning by applying full working pressure through the pilot lines. If not possible, disconnect pilot lines from cylinder valves and blank off or connect together and test with full working pressure from the release station and check for leakage. In both cases conduct this from one or more release stations when installed. If manual pull cables operate the remote release controls, verify the cables and corner pulleys are in good condition and freely move and not require an excessive amount of travel to activate the system. |  |
|  | Clean and adjust all cable components as necessary and tighten the cable connectors. If the remote release controls are operated by pneumatic pressure, check the tubing for leakage, and verify the proper charge of the remote releasing station pilot gas cylinders. All controls and warning devices shall function normally, and time delay, if fitted, shall prevent the discharge of gas for the required time period |  |
|  | After completion of the work, the system shall be returned to service. All releasing controls shall be verified in the proper position and connected to the correct control valves. All pressure switch interlocks shall be reset and returned to service. All stop valves shall be in the closed position |  |
|  | **Fixed Chemical Powder Fire Extinguishing System** (by external workshop) [MSC.1/Circ. 1432, Rules I-0 Sect. 3] - Perform hydrostatic test and internal inspection of powder containment ships |  |
|  | **Means of Embarkation on and Disembarkation from ships** (Gangways, accommodation ladders incl. winch and fittings as well as use for pilot transfer) [SOLAS II, MSC.1/Circ. 1331] |  |
|  | Examination and operational test with specified max. operational load |  |
|  | **Fire mains, fire pumps (and Em. fire pump), hydrants, fire hoses and nozzles** [MSC.1/Circ. 1432] |  |
|  | Pressure test a sample of fire hoses at the maximum fire main pressure. |  |

|  |  |
| --- | --- |
|  | ***Note*** |

*Every time, the water is refilled in an appropriate fire extinguishing system after being drained or flushed, water quality should meet maker’s guidelines. Testing of the renewed water quality should be conducted and recorded as a baseline reference to assist future water quality monitoring.*

|  |
| --- |
| **COMMENTS:** |
|  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SHIP:** |  |  | **DATE:** |  |

|  |
| --- |
| **TEN YEARLY ROUTINES** |

Tick with the **appropriate marks** each box next to the maintenance routines. Marks

* **(X)** for OK
* **(N/A)** for NOT APPLICABLE
* **(-)** for NOT OK (for NOT OK, Comments should be made in the relevant section of the form)

|  |  |  |
| --- | --- | --- |
| **ITEM** | | |
|  | **Fixed gas / CO2 fire extinguishing system** (1) (by external workshop) [MSC.1/Circ. 1318, MSC.1/Circ. 1432, Rules I-0 Sect. 3] - Check the hydrostatic test date of all storage containers |  |
|  | (1). Perform a hydrostatic test and internal examination of 10 per cent of the system's extinguishing agent and pilot cylinders. If one or more cylinders fail, a total of 50 per cent of the onboard cylinders should be tested. If further cylinders fail, all cylinders should be tested. For subsequent 10-year services, alternation of the inspected cylinders must be carried out, i.e., different cylinders must be inspected from those done in the previous services if 100% of them were not inspected |  |
|  | Replace flexible hoses at the intervals recommended by the maker and not exceeding 10 years |  |
|  | **Water mist, water spray and sprinkler systems** (by external workshop) [MSC.1/Circ. 1432, Rules I-0 Sect. 3] - perform a hydrostatic test & internal examination for gas and water pressure cylinders according to Flag guidelines or, where these do not exist, according to EN 1968:2002 + A1 |  |
|  | **Fixed dry chemical powder systems** (by external workshop) [MSC.1/Circ. 1432] - Subject all powder containment ships to hydrostatic or non-destructive testing carried out by an accredited service agent |  |
|  | **Fixed aerosol extinguishing systems** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | Condensed or dispersed aerosol generators to be renewed as per maker's recommendations |  |
|  | **Wheeled (mobile) fire extinguishers** (by external workshop) [MSC.1/Circ. 1432] |  |
|  | All extinguishers together with propellant cartridges should be hydrostatically tested by specially trained persons in accordance with recognized standards or the maker’s instructions |  |
|  | **Extra inspection requirements after discharge test (when applicable):** |  |
|  | Prove clear passage by blowing through vent holes & vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check operating and discharge control. Clean and lubricate as required - Check that safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms, if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable):** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |
|  | **Portable Foam Applicators** [MSC.1/Circ. 1432] |  |
|  | **Extra inspection requirements after discharge test (when applicable)** |  |
|  | Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check the operating and discharge control. Clean and lubricate as required |  |
|  | Check that the safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable)** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |
|  | **Galley and deep fat cooking fire-extinguishing systems** (by external workshop) [MSC.1/Circ. 1432, Rules I-0 Sect. 3] |  |
|  | **Extra inspection requirements after discharge test (when applicable)** |  |
|  | Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check the operating and discharge control. Clean and lubricate as required |  |
|  | Check that the safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms, if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable)** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |
|  | **Other portable fire extinguishers** (1) (by external workshop) [Res. A. 951(23)] |  |
|  | Hydrostatic pressure test. (to be carried out by a servicing facility or agent certified by the maker) |  |
|  | **Extra inspection requirements after discharge test (when applicable)** |  |
|  | Prove clear passage by blowing through vent holes and vent devices in the cap. Check hose, nozzle strainer, discharge tube and breather valve, as applicable. Check the operating and discharge control. Clean and lubricate as required |  |
|  | Check that the safety pin is removable and that the lever is undamaged |  |
|  | Examine for damage and corrosion. Weigh the cartridge to ascertain that it is within prescribed limits |  |
|  | Check O-rings and replace hose diaphragms, if fitted |  |
|  | Inspect the interior. Check for corrosion and lining deterioration. Check separate containers for leakage or damage (Water and foam bodies) |  |
|  | Examine the body and check internally for corrosion and lining deterioration (Powder body) |  |
|  | **Extra inspection requirements at recharge (when applicable):** |  |
|  | Replace the charge in accordance with the maker’s instructions (Water and foam bodies) |  |
|  | Reassemble the extinguisher in accordance with the maker’s instructions |  |
|  | Fill in entry on maintenance label, including full weight |  |
|  | Check the mounting bracket or stand |  |
|  | Complete a report on the state of maintenance of the extinguisher |  |

|  |  |
| --- | --- |
|  | ***Note*** |

1. *Verify specific flag requirements, if in excess.*
2. *Notwithstanding, whenever the loss in pressure of permanently pressurized marine portable fire- extinguishers exceeds 10% of the nominal pressure the extinguishers shall be hydrostatically pressure tested before being recharged.*
3. *The test date and test pressure should be “hard-stamped” on the cylinders of CO2 extinguishers and on propellant cartridges. For extinguishers of a type other than CO2, the test date and test pressure should be entered in the tag attached to the extinguisher.*
4. *The test pressures should be in accordance with the table, in the Appendix II of the present ten-yearly routines.*

|  |
| --- |
| **COMMENTS:** |
|  |

|  | **NAME** |  | **SIGNATURE** |  | **DATE** |
| --- | --- | --- | --- | --- | --- |
| **C/O** |  |  |  |  |  |
| **C/E** |  |  |  |  |  |
| **MASTER** |  |  |  |  |  |

**Appendix II**

**EXTINGUISHERS TEST PRESSURES**

|  |  |
| --- | --- |
| **FIRE EXTINGUISHERS AND PROPELLANT CARTRIDGES** | **TEST PRESSURE** |
| Water | At least 1.5 times working pressure (or 2 N/mm2 if the working pressure is unknown) |
| Foam |
| Dry Chemical |
| Powder (permanently pressurized) |
| Powder (non-permanently pressurized) |
| Carbon Dioxide | At least 25 N/mm2 |
| Propellant Cartridges | At least 2 times working pressure or 25 N/mm2 or 35 N/mm2 |
| CO2 type with safety devices |
| CO2 type without safety devices |