The **Inspection Criteria References (ICR)** are grouped in pre-developed forms by the subchapter in Title 46 applicable to the vessel the Vessel Action Plan (VAP) is being developed for. They are comprised of four sections.

- **Section One** identifies the System, Subsystem, and the ICR Number for referencing the item.
- **Section Two** identifies the authorities—Who is the authorized inspector, what the specific reference for requiring the inspection item, and what the inspection frequency is for that item.
- **Section Three** provides the inspection criteria—how to determine if the item is in compliance.
- **Section Four** identifies what actions are required if the item is found deficient.

In order to prepare the form, the Company SIP Agent will:

- Delete those ICR items that do not apply to the vessel in question.
- Add ICRs for vessel systems that are not provided for in the subchapter specific package, but remain required elements for the vessel inspection program.
- Note all changes on the Record of Changes page.

**CAVEAT:** Under no circumstances is the list contained here to be considered complete for all vessels that may be enrolled in SIP. It is provided as a template only. ICRs are to be provided for all vessel systems required to be inspected. This would include relevant sections of Titles 33, 46, and 49 CFR, and amplifying policy or regulations, such as IMO Conventions, Treaties, Navigation and Inspection Circulars (NVIC), The Marine Safety Manual, and Official Coast Guard Policy Letters. These documents should be reviewed periodically for currency and revised as the underlying regulations or policy changes.

# STREAMLINED INSPECTION PROGRAM

# INSPECTION CRITERIA REFERENCE

# (ICR)

For U.S. inspected cargo vessels

(Subchapter I)

**Subchapter I**

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## RECORD OF CHANGES

| CHANGE NUMBER | DATE OF CHANGE | DATE ENTERED | BY WHOM ENTERED |
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**SYSTEM:** DOCUMENTS AND PAPERWORK **ICR NUMBER:** **A**
**SUBSYSTEM:** REQUIRED DOCUMENTS **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 97.05-5, 97.11, 97.12, 97.19, 97.13, 97.43; 33 CFR 72, 164, 151.59(e), 155.450
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify that the following documents are on board and current:

1. Certificate of Inspection
2. FCC Certificate/ License
3. Certificate of Financial Responsibility
4. Certificate of Documentation
5. Stability Letter
6. Officers License's
7. Watch Quarter and Station Bill
8. Bridge Record Card
9. Loading Manual
10. Loadline Certificate
11. Maneuvering Information Data Sheet

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## DEFICIENCY ACTION

OBTAIN CURRENT DOCUMENT AND PLACE ONBOARD PRIOR TO OPERATION, OR NOTIFY THE COGNIZANT OCMI.

**SYSTEM:** DOCUMENTS AND PAPERWORK **ICR NUMBER:** **A**
**SUBSYSTEM:** REQUIRED PUBLICATIONS **02**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 97.05-5, 97.11, 97.12, 97.19, 97.13, 97.43; 33 CFR 72, 164, 151.59(e), 155.450
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify that the following publications or appropriate extracts are onboard and currently corrected for the intended operating area as determined by the OCMI:

1. Navigation Rules
2. Coast Pilot
3. Charts
4. Notice to Mariners
5. Tide Tables
6. Current Tables
7. Light Lists

B. Verify vessel log is up to date and all required log entries are being made.

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## DEFICIENCY ACTION

OBTAIN CURRENT PUBLICATIONS AND PLACE ONBOARD IN A TIMELY MANNER.

**SYSTEM**: DOCUMENTS AND PAPERWORK **ICR NUMBER: A**
**SUBSYSTEM:** COAST GUARD AND SOLAS FORMS **03/5**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 115.302, 306
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Certificate of Inspection
   1. Must be displayed under glass in a conspicuous place.
   2. Posted where observation of passengers is likely.

B. Stability Letter (if issued)
   1. Must be displayed under glass.
   2. Must be visible from the operating station.

C. SOLAS Passenger Ship Safety Certifications Certificates (international voyage)
   1. Must be displayed under glass in a conspicuous place.
   2. Posted where observation of passengers is likely.

---

## DEFICIENCY ACTION

OBTAIN AND POST FORMS PRIOR TO ENTERING THE VESSEL IN A PASSENGER CARRYING SERVICE

**SYSTEM**: DOCUMENTS AND PAPERWORK **ICR NUMBER: A**
**SUBSYSTEM:** POLLUTION/MARPOL **04**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 121.702, 33 CFR 155.450, 151.59, MARPOL 73/781
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. The following apply to a vessel that is 26’ or more in length.

1. Verify the legibility of the MARPOL Annex I -"DISCHARGE OF OIL PROHIBITED" placard, as displayed in the machinery space or bilge and ballast pump control station.
2. Verify the legibility of the MARPOL Annex V- "GARBAGE" placard as displayed in a prominent location and in sufficient numbers to be visible to passengers and crew.

B. All oceangoing U.S. vessels of 40 feet or more in length are required to maintain a written waste management plan onboard.

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## DEFICIENCY ACTION

PROVIDE PLACARD AND/OR WASTE MANAGEMENT PLAN ONBOARD.

**SYSTEM**: DOCUMENTS AND PAPERWORK **ICR NUMBER: A**
**SUBSYSTEM:** VESSEL MANNING **06**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 10; 12; 15; SOLAS CHAPTER I
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Number of officer and unlicensed crew required
   1. Certificate of Inspection
   2. Safe Manning Document

B. Licenses valid, endorsed, posted
   1. Date of issue and/or expiration
      a. Licensed Officers- Deck, Engineer
      b. Tonnage, route, radar observer, firefighting, horsepower- steam or diesel, etc.

C. MMD's are appropriate for jobs
   1. Able seamen, QMED, etc.
      a. Endorsements such as : lifeboat man, lookout, etc.

D. Reduced manning requirements are being met. (If Applicable).
   1. As per local OCMI, Administrative organization, Classification society.

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## DEFICIENCY ACTION

OBTAIN PROPERLY QUALIFIED PERSONNEL. IF VESSEL MUST SAIL SHORT CONTACT COGNIZANT OCMI PRIOR TO BEGINNING VOYAGE

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** LIFE PRESERVERS (PFDS) AND STORAGE **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 94.40, 97.37-20, 97.37
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. PFDs shall be provided in the quantities required by the vessel's Certificate of Inspection (COI), PLUS 2 for each lifeboat.

B. On vessels where areas forward are widely separated from the messing and recreation facilities, PFDs equal to 50% of the total persons on board shall be provided and stowed in containers in the vicinity of the lifeboats.

C. Retroreflective material on both sides, at least 31 sq. inches on each side.

D. Type I, CG approved.

E. Verify PFD lights work. If chemical type, check expiration date. If battery type, check battery expiration date, lens and seal.

F. Vessel name clearly labeled on each PFD.

G. Inspect all PFDs to determine condition:

1. Check the envelope, tie straps, stitching and lifting attachments for rot or deterioration. Give the components a mild tug if they show evidence of defect.

2. Check the floatation medium for excessive hardness, stiffness, lumpiness, non-resilience, or dirty or oil soaked condition. Note: Small leaks in the envelope are acceptable as long as the floatation material shows none of the other defects.

3. Remove any defective PFDs from the vessel and destroy them.

H. A child sized PFD shall be provided for each child on board.

## DEFICIENCY ACTION

REMOVE DEFICIENT PFD FROM THE VESSEL, AND REPLACE WITH A SERVICEABLE PFD. IF UNABLE TO REPLACE, IMMEDIATE NOTIFICATION OF COGNIZANT OCMI REQUIRED, AND PERSONS ALLOWED REDUCED TO NUMBER OF SERVICEABLE PFD'S ONBOARD.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** RING BUOYS AND WATERLIGHTS **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 199.70, 199.271
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify all ring buoys are USCG approved, 30" diameter, free of cracks that expose the floatation material and excessive weathering. Grab lines and beckets shall be free of deterioration.

B. Ring buoys with attached lines shall be examined to verify the line is serviceable, not rotted, knotted or otherwise unsatisfactory for continued service. The line must be secured to the ring buoy.

C. Verify the vessel's name is marked on the ring buoy.

D. Check that each waterlight is operable. Batteries shall be replaced annually.

> **NOTE:** Use only the type of battery designated by the manufacturer. Recent experience has shown the use of alkaline batteries in some models may cause the waterlight to sink. Examine the lens and shake the light to be sure no water has leaked or condensed in the light. Operationally test each light.

E. Verify the ring buoys and waterlights are rack mounted.

F. Verify the number of ring buoys, number of buoys equipped with lines, and number of buoys equipped with waterlights conform to that required on the vessel's Certificate of Inspection (COI).

## DEFICIENCY ACTION

REPLACE DEFICIENT ITEM. ENSURE IT IS STENCILED AND PROPERLY STOWED. IF UNABLE TO CORRECT DEFICIENCY PRIOR TO OPERATION, NOTIFY COGNIZANT OCMI.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** RESCUE BOAT **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 199.140, 199.175, 199.176, 199.262. 199.620, 199.640
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY/MONTHLY/WEEKLY

## INSPECTION CRITERIA

A. Able to be launched within 5minutes

B. If inflatable, boat is fully inflated.

C. Means to recharge onboard batteries at less than 50 volts operable.

D. If Rescue Boat is also a lifeboat, it must also meet all lifeboat requirements.

E. 1. Verify the name of the vessel and the lifeboat number are marked on each side of the bow in at least 3" letters.

2. Verify the cubic capacity is marked on each side of the bow in at least 1 1/2" letters.

3. Verify the number of persons allowed is plainly marked or painted on the top of at least 2 thwarts, in at least 3" letters.

F. 1. Examine all required outfit items for proper approval, serviceability and condition. Reference Table 46 CFR 199.175 and 199.620(j).

2. Examine flashlight batteries. Ensure expiration dates are within specification. Verify that spare batteries and bulbs are provided and tested.

3. Examine the flares for approval and expiration dates. Replacement shall be no later than the first annual stripping and cleaning after the expiration date.

4. Replace all outfit items back in their proper storage containers and locations

G. Verify retro-reflective material is properly installed.

## DEFICIENCY ACTION

CONTACT COGNIZANT OCMI WITH ANY STRUCTURAL PROBLEMS. REPAIR OR REPLACE LIFEBOAT EQUIPMENT IN A TIMELY MANNER AND NOTE IN DEFICIENCY LOG.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** INFLATABLE LIFERAFTS **05**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 160.051, 199.110, 199.120, 199.145, 199.175, 199.190, 199.260, 199.280, 199.610, 199.620, 199.640
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Servicing:
   1. Verify liferafts have been serviced annually at an approved liferaft servicing facility.
   2. Verify the hydraulic releases have been serviced annually, at an approved servicing facility, or replaced at their expiration date.
   3. Verify documentation of servicing has been retained. (Provided by the vendor)

B. Inspection:
   1. Verify the liferafts are installed in accordance with the vessel's Certificate of Inspection regarding size and location.
   2. All rafts must be USCG approved.
   3. Verify the sea painter is in good condition and properly secured to the vessel.
   4. Verify the raft cradle is in good condition, properly sized for the raft and adequately secured to the vessel.
   5. Verify posted instructions for launching and boarding of the liferaft are legible and accurately reflect the installation.
   6. Verify the container bands are in place and properly positioned.
   7. Verify the hydrostatic release is properly installed and tensioned in accordance with the manufacturers instructions. The manual release must be facing inboard and accessible.

C. Verify the liferaft station is marked with the raft number and the total persons capacity in letters at least 1 1/2" in height. These shall not be placed on the raft container.

## DEFICIENCY ACTION

IF PAST SERVICING DATE, REPLACE WITH CURRENT LIFE RAFT. IF UNABLE TO DO SO PRIOR TO OPERATING, CONTACT THE COGNIZANT OCMI

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** LIFEBOATS **06a**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 199.45, 199.110, 199.120, 199.150, 199.153, 199.155, 199.157, 199.175, 199.176199.190, 199.261199.280, 199.290, 199.520, 199.620, 199.640.
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. 1. Lift the lifeboat from the cradle, and carefully examine the exterior of the hull for damage or deterioration.

2. Ensure the grab rails are tight.

3. Ensure all rivets or welded seems are in tact.

4. Examine interior and exterior connections of the hoisting fittings for damage, deterioration and proper maintenance.

B. 1. Examine the interior structure of the boats. Verify seats and thwarts are firmly attached and free of rot and cracks.

2. Examine the interior for dirt and debris. Remove all lifeboat outfit equipment, clean and inspect.

3. Verify the top of the thwarts, side benches and footings of the lifeboat are painted international orange.

4. Verify the area in way of the disengaging apparatus lever from the keel to the side bench is painted or otherwise colored white, approximately 12” in width, and free of any obstructions.

5. Verify the release handle is painted bright red and the raised letter danger warning is clearly visible.

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## DEFICIENCY ACTION

CONTACT COGNIZANT OCMI WITH ANY STRUCTURAL PROBLEMS. REPAIR OR REPLACE LIFEBOAT EQUIPMENT IN A TIMELY MANNER AND NOTE IN DEFICIENCY LOG.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** LIFEBOATS **06a**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 199.45, 199.110, 199.120, 199.150, 199.153, 199.155, 199.157, 199.175, 199.176199.190, 199.261199.280, 199.290, 199.520, 199.620, 199.640.
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

C. 1. Verify the name of the vessel and the lifeboat number are marked on each side of the bow in at least 3" letters.

2. Verify the cubic capacity is marked on each side of the bow in at least 1 1/2" letters.

3. Verify the number of persons allowed is plainly marked or painted on the top of at least 2 thwarts, in at least 3" letters.

D. 1. Examine all required outfit items for proper approval, serviceability and condition. Reference Table 46 CFR 199.175 and 199.620(j).

2. Examine flashlight batteries. Ensure expiration dates are within specification. Verify that spare batteries and bulbs are provided and tested.

3. Examine the flares for approval and expiration dates. Replacement shall be no later than the first annual stripping and cleaning after the expiration date.

4. Replace all outfit items back in their proper storage containers and locations.

E. 1. Verify last strip clean and overhaul date occurred within last year; if not; strip, clean and overhaul lifeboat.

## DEFICIENCY ACTION

CONTACT COGNIZANT OCMI WITH ANY STRUCTURAL PROBLEMS. REPAIR OR REPLACE LIFEBOAT EQUIPMENT IN A TIMELY MANNER AND NOTE IN DEFICIENCY LOG..

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** LIFEBOAT WEIGHT TEST **06b**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 199.190
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Strip lifeboat of all outfit items.

B. Fill the lifeboat with weight equal to the lifeboat capacity times 165 lbs or the “condition B” weight on the capacity plate. If the boat has a “Certified Test Waterline” plate installed, fill to the line with water. In this case metering is not necessary. Either certified test weights or metered water is acceptable if a plate is not installed. Weights must be evenly distributed throughout the boat to prevent hull damage.

C. When the required weight has been placed in the boat, wait 10 minutes, lower the boat and at approximately 2 meter intervals release the brake so that the boat stops, continue until boat is just afloat but with tension on the falls, and release the falls. Prior to releasing the weight, inspect the falls, foundations, davits, and release mechanism for stress or deformation.

D. Brake must stop the lowering of the boat with no additional pressure.

E. Release mechanism opens all hooks simultaneously.

---

## DEFICIENCY ACTION

PRIOR TO OPERATING, CONTACT THE COGNIZANT OCMI.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** DAVITS **06c**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25-15, 199.190
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Examine davit foundations and mounting bolts for corrosion and deterioration.

B. Operate davits, ensure rollers are free to turn.

C. Ensure limit switches operate properly.

## DEFICIENCY ACTION

PRIOR TO OPERATING, CONTACT THE COGNIZANT OCMI.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** LINE THROWING APPARATUS **07**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 199.170, 199.610, 199.620
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify approval number is under approval series 46 CFR 160.040 or 160.031 as applicable.

B. Line-throwing appliance and equipment readily accessible for use.

C. Verify equipment on list provided by manufacturer is present.

D. An Auxiliary line is present that:

1. is at least 450 meters (1500 feet) long.
2. breaking strength is 40 kiloNewtons (9000 pounds).
3. if synthetic and dark color; certified by manufacturer to be resistant to U/V deterioration.
4. if appliance under 160.031 series length of line can be 150 meters (500 feet).

E. Verify required drills are held and logged.

## DEFICIENCY ACTION

NOTE IN DEFICENCY LOG AND REPLACE EQUIPMENT AS REQUIRED; IF UNABLE TO CORRECT NOTIFY THE COGNIZANT OCMI.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **B**
**SUBSYSTEM:** IMMERSION AND EXPOSURE SUITS **08**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 160.153, 160.171, 119.70, 119.273, 199.610.
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. The number of exposure suits provided shall be at least equal to the number required on the vessel's Certificate of Inspection.

B. A properly fitted suit must be provided for each person onboard.

C. Each suit must have its own container, properly marked with the size (child, adult, oversized, jumbo etc.)

D. Examination:

1. Lay out each suit and verify all component parts are intact.
2. Verify all zippers are operable. Lubricate if required.
3. Verify all seems are not torn or parting.
4. Verify there are no holes, tears, or abrasions in the fabric.
5. Inspect the boot soles and mitten palms for wear or deterioration.
6. Verify the bleed valves in the feet are working properly, are not deformed, bonded shut or torn.
7. Verify the reflective material in intact.
8. Complete a test of the floatation collar for leaks. Be sure the inflation tube is intact, without kinks and the valve operates freely and properly.
9. Verify the chemical light or battery light is in proper condition, with seals intact, and the expiration dates are valid on the chemical lights and installed batteries.
10. Vessel's name is marked on each suit in block capital letters.
11. With the suit completely dry, re-pack and return to the proper stowage location.

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND REPAIR/REPLACE PRIOR TO OPERATING.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** FIXED SYSTEMS **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.20-15, 91.25-20, 95.15, 95.17
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify storage bottles are corrosion free

B. Are “pigtails” in good condition and properly routed with no kinks or damage?

C. Check all heads to verify nuts are tight.

D. Verify operating controls, both local and remote, are properly and clearly labeled, with the instructions clear and concise.

E. Verify all mounting clamps are tight.

F. Ascertain that the last system inspection was completed within 12 months and system tags and seals are intact.

G. Verify galley systems are serviced; equipment free of excess grease.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND HAVE SERVICED IN A TIMELY MANNER.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** SEMI PORTABLE SYSTEMS **02**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25-20, 95.50, 97.15-60
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify the semi portable extinguishers are located where they are easily visible, and the area is free of obstructions.

B. Verify the frame is adequately secured to the structure to prevent movement from vessel action.

C. Verify the installation is corrosion free and in good general condition.

D. Verify the gauge, if installed, reflects a full charge.

E. Check that hoses are flexible, and not worn or cracked.

F. Verify the nozzle in intact, the lever operates freely, and the horn is free of obstructions.

G. Verify the hydro dates are current.

H. Insure the dry chemical is not packed or caked by an internal visual examination.

I. Verify the pull ring servicing seal is intact.

J. Document and retain all required work and testing completed.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND TAKE CORRECTIVE ACTION IN A TIMELY MANNER.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** PORTABLE EXTINGUISHERS **03**

## AUTHORIZATION

AUTHORIZED INSPECTOR: LICENSED OFFICER or his designated representative
REFERENCES: 46 CFR 91.25-20, 95.05, 95.50, 97.37
REGULATORY INSPECTION FREQUENCY: ANNUALLY

## INSPECTION CRITERIA

A. Verify the extinguishers are corrosion free.
B. Verify the gauge reflects a full charge.
C. Ensure hoses are flexible and not worn or cracked.
D. Verify the nozzle is not damaged or filled with dirt or debris.
E. Verify the hydro dates are current. (5 yr for CO2, and 6 yr for DC)
F. Verify extinguishers are in the proper location, and the extinguishers are stenciled with at least 1/2" letters, matching the fire control plan.
G. Ascertain the holding bracket is the correct type, and is properly secured.
H. Verify the types and sizes match the USCG approved fire control plan.
I. Verify the last annual inspection was completed within 12 months.
J. Verify the servicing seal is intact on the pull ring.
K. Ensure the dry chemical is not settled or caked by inverting and agitating, or inspecting visually.
L. Verify spare charges are aboard for 50% of each unit carried. If the units are not easily serviced, 1 spare unit of each class shall be kept aboard in lieu of the required spare charges.

## DEFICIENCY ACTION

REPLACE/REPAIR DEFICIENT ITEMS. IF A DEFICIENCY CANNOT BE CORRECTED, PRIOR TO VESSEL'S OPERATION, NOTIFY THE COGNIZANT OCMI.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** SELF CONTAINED BREATHING APPARATUS **04**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 96.30-15, 96.30-20, 96.35, 97.37
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

---

## INSPECTION CRITERIA

A. Verify cylinders are:
   1. Fully charged
   2. Hydrostatic test dates are current
   3. Cylinders are free of corrosion or defect
   4. Properly stowed

B. Verify hoses are:
   1. Free of signs of deterioration
   2. properly connected

C. Verify face mask is:
   1. Not cracked or badly scratched
   2. Does not show any loss of flexibility
   3. Is not cracking at the seal edges
   4. Lens is mounted correctly

D. Inspect head straps for:
   1. Breaks
   2. Loss of elasticity
   3. Broken, missing or malfunctioning buckles
   4. Excessive wear

E. Test low pressure and timer alarms for proper operation.

F. Verify steel safety cable is available.

G. Verify a spare charge is available for each unit.

H. Verify the unit is stowed in the locations designated on the fire control plan.

---

## DEFICIENCY ACTION

NOTE IN DEFIENCY LOG AND CORRECTIVE ACTION IN A TIMELY MANNER.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** FIRE HOSE STATIONS **06**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 95.10
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify the hose rack is attached in the location specified by the vessel's Fire Control Plan.

B. Verify the station is stenciled in accordance with the Fire Control Plan in minimum 2" high letters. If the station is in a cabinet, the station must be readily seen from a distance.

C. Hoses:
   1. Verify the hose is approved type with compatible threads. (UL standards)
   2. Verify the hose length is specified on the Fire Control Plan.
   3. Verify the hose is marked with the vessel name. No minimum size is specified.
   4. Examine the hose and verify it is free of fraying, cracks and visible leaks.
   5. Verify all hoses are properly attached to the hydrant.

D. Verify a spanner wrench is located at each station.

E. Nozzles:
   1. Verify an approved nozzle is connected to each hose.
   2. Verify the nozzle handle is free and clear of dirt and debris.
   3. Verify the nozzle tips insert, lock and remove easily.

F. Complete a functional hose and station test, to verify station valves operate freely and do not leak under pressure.

G. Verify that machinery space stations, with oil fired boilers, internal combustion engines, or oil fired units have an approved 4' water spray applicator, with fixed brackets, hooks or other means of storing.

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## DEFICIENCY ACTION

TAKE IMMEDIATE CORRECTIVE ACTION. IF UNABLE TO CORRECT PRIOR TO OPERATING, CONTACT THE COGNIZANT OCMI. NOTE IN DEFICIENCY LOG.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** FIREMAIN/PUMPS **07**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25, 95.10
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify operation of system, by testing fire pumps on normal and emergency power.

B. Check pressure at the most remote and highest outlets for adequate stream.

C. Test all hoses to the highest pressure to which they may subjected.

D. Flow test the lowest firemain stations forward and aft. Verify proper operation of the valves.

E. Examine all firemain lines for leaks and deterioration. Check all valves for a positive seal.

F. Check all piping hangers.

G. Inspect fire pumps for:
   1. foundations
   2. coupling condition
   3. bearing noises
   4. controls
   5. emergency power operation

H. Firemain Cutouts:
   1. Verify valves are conspicuously marked
   2. Verify valves operate freely and properly
   3. Verify locations are as noted on the Fire Control Plan

---

## DEFICIENCY ACTION

IF UNABLE TO CORRECT PRIOR TO OPERATING, CONTACT COGNIZANT OCMI.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** FIRE AXES **08**

---

## AUTHORIZATION

AUTHORIZED INSPECTOR: LICENSED OFFICER or his designated representative
REFERENCES: 46 CFR 95.660, 97.37
REGULATORY INSPECTION FREQUENCY: ANNUALLY

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## INSPECTION CRITERIA

A. Verify axes are an approved type with single edge and a spike.
B. Verify the ax handle is free of cracks and the head is securely attached to the handle.
C. Verify the axes are painted red.
D. Verify the axes are marked with the vessel's name. No minimum size specified.
E. Verify the wall rack is secured and located in accordance with the Fire Control Plan.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND TAKE CORRECTIVE ACTION IN A TIMELY MANNER.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** FIREMAN'S OUTFIT **09**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 96.35
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify each outfit contains:
   1. Flame safety lamp meeting 160.016 specifications.
   2. SCBA with a minimum 30 minute air supply and at least one spare charge.
   3. Flashlight that is type II or type III and marked as such with one set of spare batteries.
   4. Lifeline of steel or bronze wire rope of at least 50 feet in length with hook and keeper at each end and belt or harness (total length of line is dependent on vessel size and arrangement).
   5. Boots and gloves of rubber or other electrically non-conducting material.
   6. Helmet.
   7. Protective clothing that is water resistant on the outer surface.
   8. Fire axe.

B. Verify there are 2 firemen outfits ready for immediate use on the vessel.

---

## DEFICIENCY ACTION

REPLACE MISSING OR INOPERABLE EQUIPMENT PRIOR TO OPERATION.

**SYSTEM:** FIRE PROTECTION EQUIPMENT **ICR NUMBER:** **C**
**SUBSYSTEM:** FIRE CONTROL PLAN **10**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 92
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify fire control plan complies with regulations. Current fire control plan posted and approved.

B. Verify information on fire control plan is current and correct.

C. Equipment listed on fire control plan located in proper place on vessel.

D. Ensure storage of plan is clearly marked and crew is aware of location.

---

## DEFICIENCY ACTION

ALL DEFICIENCIES NOTED ON THE FIRE PLAN SHOULD BE CORRECTED OR UPDATED ON THE PLAN. ENSURE THAT DEFICIENCIES DO NOT CONFLICT WITH THE MINIMUM REQUIRED EQUIPMENT ON THE COI. SUBMIT UPDATED PLAN TO COGNIZANT OCMI FOR APPROVAL.

**SYSTEM:** STRUCTURAL FIRE PROTECTION **ICR NUMBER: D**
**SUBSYSTEM:** STRUCTURAL FIRE PROTECTION

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 92.07
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Structural fire protection is addressed closely during the new construction or modification of a vessel. Over time, may be made that adversely alter the degree of protection offered by the structural fire protection. This area should be examined/considered each year and prior to modification work:

1. Verify that no non-approved or unacceptable material has been used as a finish or covering in a space.
2. Fire resistant furnishings, flame resistant draperies, and rugs of 100% wool or equivalent are used.
3. No fire hazard exists.
4. Waste receptacles made of noncombustible materials unless otherwise approved by OCMI.
5. Verify proper operation of fire screen doors locally and from the bridge.
6. Check fire load calculations against actual material in space; change will usually occur in this area.

B. Review the fire control plan and general arrangement plan to determine space, bulkhead, and deck designations.

C. Verify that integrity of all A class bulkheads remain intact. Ensure insulation is in place and not compromised.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG. NOTIFY COGNIZANT OCMI WITH PROPOSALS FOR CORRECTION.

**SYSTEM:** EMERGENCY EQUIPMENT **ICR NUMBER: E**
**SUBSYSTEM:** EPIRB AND SEARCH AND RESCUE TRANSPONDERS **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 119.45, 119.190, 119.510, 119.610, 199.620
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY/MONTHLY

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## INSPECTION CRITERIA

A. Tested monthly using visual or audio output indicator.

B. Stowed in a manner so that it will float free should the vessel sink & auto activate.

C. Replace battery if EPIRB is used for purposes other than testing. Replace battery on or before the expiration date marked on the battery.

D. Vessel name shall be marked on EPIRB.

E. Vessels on Great Lakes service that have two Class C EPIRBs vice the Class A shall ensure these EPIRBs are:

   1. Installed in a weather tight enclosure.
   2. Located in a readily accessible location.
   3. One on each side of the vessel, and
   4. At or near the principle embarkation stations.

---

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO THE VESSEL OPERATING. IF UNABLE, CONTACT THE COGNIZANT OCMI. NOTE IN DEFICIENCY LOG.

**SYSTEM:** EMERGENCY EQUIPMENT **ICR NUMBER:** **E**
**SUBSYSTEM:** GENERAL ALARMS **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 97.37, 113.25
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify all General Alarm bells are audible and stenciled “WHEN BELL RINGS GO TO YOUR STATION” in 1/2” red letters.

B. Verify location of bells are adequate.

C. Verify machinery space beacons are working properly and on emergency power if AC.

D. Verify all contact makers work and the spring loaded return levers operate correctly.

E. Verify emergency battery condition and charge status.

F. Verify contact makers are clearly marked “GENERAL ALARM” and “ON/OFF”.

G. Verify flashing red lights are provided and operating in high noise areas.

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, NOTIFY THE COGNIZANT OCMI. NOTE IN DEFICIENCY LOG.

**SYSTEM:** EMERGENCY EQUIPMENT **ICR NUMBER:** **E**
**SUBSYSTEM:** DISTRESS SIGNALS **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 94.90, 97.15-3, 160.021, 33 CFR 84, 96.21, NAVRULES
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Pyrotechnics:
   1. Verify 12 hand held, USCG approved, red flares, in approved watertight container are carried in the pilothouse.
   2. Verify the expiration dates have not been exceeded.

B. Day Signals:

1. Verify 3 black balls, in serviceable condition, are carried aboard.

C. Breakdown, Not Under Command Lights:
   1. Verify lights are working properly.

D. Verify an approved gong and bell are carried aboard.

E. Verify the ship's whistle works and all controls, both hand and automatic function properly.

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## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** EMERGENCY EQUIPMENT **ICR NUMBER:** **E**
**SUBSYSTEM:** INTERNAL COMMUNICATIONS EQUIPMENT **04**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 113.30-5, 113.35, 33 CFR 164.35
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Communications:
   1. Verify communications systems between the following locations:
      a. wheelhouse
      b. steering gear room
      c. alternate steering station
      d. engine control room
      e. gyro room (if separate from pilot house)
      f. lookout station (if voice comms not possible)
      g. if capable of pilot house control, each local engine room control station, unless EOT is provided.

B. Engine Order Telegraph:
   1. Verify operation of the pilot house/engine room EOT
      a. verify sound signals are accurate
      b. verify light signals are accurate
      c. verify visual indicators match all stations
      d. verify EOT power failure alarm functions

---

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** VENTILATION **ICR NUMBER:** **F**
**SUBSYSTEM:** VENTILATION SHUTDOWN – MANUAL **01a**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Test all ventilation and fire dampers; check proper operation and labeling.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND REPAIR IN A TIMELY MANNER.

**SYSTEM:** VENTILATION **ICR NUMBER:** **F**
**SUBSYSTEM:** VENTILATION SHUTDOWN – AUTOMATIC **01b**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Ensure proper operation of all automatic shutdown systems.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND REPAIR IN A TIMELY MANNER.

**SYSTEM:** VENTILATION **ICR NUMBER:** **F**
**SUBSYSTEM:** FUEL TANK VENTS **02**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Vent line not holed or excessively corroded.
B. Flame screen or flame arrester is clean, in good condition and firmly attached to the vent.
C. Flame screen is a single screen of 30x30.
D. Containment is available, clean, dry and in good condition.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND REPAIR IN A TIMELY MANNER.

**SYSTEM:** VENTILATION **ICR NUMBER:** **F**
**SUBSYSTEM:** VOID AND WATER TANK VENTS **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Vent line not holed of excessively corroded.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND REPAIR IN A TIMELY MANNER.

**SYSTEM:** VENTILATION **ICR NUMBER:** **F**
**SUBSYSTEM:** GALLEY VENTS **04**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Grease extraction hood UL listed.

B. Vent trunk not holed or excessively corroded.

C. Interior of vent free of grease.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND REPAIR IN A TIMELY MANNER.

**SYSTEM:** NAVIGATION **ICR NUMBER:** **G**
**SUBSYSTEM:** RADARS **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 164.37
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. For all of the required and/or installed radars:
   1. Verify acceptable picture quality.
   2. Verify all controls and adjustments function properly and achieve the desired results.
   3. Verify the required fusing is installed in accordance with the manufacturers instructions.
   4. Clean and dry air filter screens.
   5. Verify the controls are adequately illuminated.
   6. Verify a daylight shield, if required, is provided.
   7. Verify all mountings are secured.
   8. Verify all antennas are securely mounted.
   9. Verify all cables are free from deterioration and damage.

---

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION EQUIPMENT **ICR NUMBER:** **G**
**SUBSYSTEM:** MAGNETIC COMPASS **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 164.35
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Check for illumination.

B. Ensure compass can be read from main steering position.

C. Ensure deviation table is current, and no major structural changes have been made.

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, NOTIFY THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION **ICR NUMBER:** **G**
**SUBSYSTEM:** DEPTH SOUNDING EQUIPMENT **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 164.35,46 CFR 96.27-1
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify the vessel is equipped with a properly marked deep sea, hand lead line. Verify the line is serviceable, showing no signs of fraying, rot or deterioration.

B. Electronic Depth Finder:

1. Verify the vessel is equipped with a properly operating echo depth sounder.
2. Verify the controls and adjustments are functional.
3. Verify fusing is installed in accordance with the manufacturers specifications.
4. Verify the equipment mounting is secure.
5. The master is to verify the accuracy by an alternate reliable means, or careful comparison with charted depths.

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION **ICR NUMBER:** **G**
**SUBSYSTEM:** RADIO COMMUNICATION EQUIPMENT **04**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 161.820, 161.822
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. As appropriate for the installed single side band (SSB) and VHF-FM radios:
   1. Verify the current FCC license is aboard.
   2. Verify the operator controls and adjustments are functional.
   3. Verify fusing is installed in accordance with the manufacturers specifications.
   4. Verify the required frequencies are available.
   5. Inspect the antennas, mounts, and cables for chafing, weathering or damage.
   6. Check for proper illumination.
   7. Ensure that the unit is mounted adequately.
   8. Verify emergency power is available:
      a. Verify the condition of the emergency batteries.
      b. Verify mountings and containment of the batteries is adequate.
      c. Verify the charger is functional and adjusted properly.
   9. Verify the operators licenses are valid and posted.

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION EQUIPMENT **ICR NUMBER:** **G**
**SUBSYSTEM:** NAVIGATION LIGHTS **05**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 96.05-1, 111.75-17, 112.15, 33 CFR 80-90, NAVRULES
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify that navigation lights are operable. Test on emergency power if installed.
B. Proper bulbs installed.
C. Indicator panel:
   1. Verify the panel indicators function for all required lights.
   2. Verify indicators and alarms function for the masthead, side, stern and range lights.
   3. Test the alarms and indicators by removal of fuses or bulbs. Bulbs at the fixture

   being the preferred method, if practical.
D. Verify lights are installed in accordance with Navigation Rules.
E. Reflective screens in place and painted matte black?
F. Lenses clean, wiring free of splices; no deterioration, installation appears sound.
G. Verify there are no obstructions affecting the visibility of the navigation lights.

---

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION **ICR NUMBER:** **G**
**SUBSYSTEM:** ELECTRONIC NAVIGATION EQUIPMENT **06**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 164.31
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. As appropriate for the vessel's installed GPS, SATNAV and LORAN navigation equipment:

1. Verify the operator controls and adjustments are functional.
2. Verify proper fuses are installed in accordance with the manufacturers specifications.
3. Verify proper illumination.
4. Inspect antennas, mounts and cables for chafing, weathering or damage.
5. Verify the accuracy of the units by alternative, reliable means.

## DEFICIENCY ACTION

MAKE CORRECTIVE REPAIRS PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION EQUIPMENT **ICR NUMBER:** **G**
**SUBSYSTEM:** CHARTS AND PUBLICATION **07**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 164
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify the following are up-to-date and adequate for the route intended;
   1. Large scale charts,
   2. Coast Pilot,
   3. Light List,
   4. Tide Tables,
   5. Current tables or River Current Publications.

---

## DEFICIENCY ACTION

OBTAIN RECENT PUBLICATIONS AND UPDATE CHARTS WITH THE MOST RECENT LOCAL NOTICE TO MARINERS, PRIOR TO OPERATING OR CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION EQUIPMENT **ICR NUMBER:** **G**
**SUBSYSTEM:** LOGBOOKS **10**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 97.35
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Ensure the Official Logbook is maintained in an accurate and timely manner, and at a minimum, the following entries are made:

1. Fire and Boat Drills. (weekly)
2. Steering Gear, Whistle, and Means of Communication. (prior to departure)
3. Draft and Loadline Markings. (Prior to leaving port)
4. Verification of vessel compliance with applicable stability requirements (after loading and prior to departure).
5. Loading Doors. (where applicable, every closing and any opening when not docked)
6. Hatches and other openings. (all openings and closings, or leaving port without closing. except vessels on protected waters)
7. Line Throwing Appliances. (once every 3 months)
8. Emergency Power and Lighting Systems. (weekly and semi-annually)
9. Electric Power Operated Lifeboat Winches. (once every 3 months)
10. Fuel Oil Data. (upon receipt of fuel onboard)
11. Cargo Gear Inspections. (at least once a month)
12. Inflatable hopper gate seals. (when installed, after carriage of cargo)

B. All items relative to the crew and passengers, as well as with respect to any casualties which may occur, shall be logged.

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## DEFICIENCY ACTION

CORRECT/MAKE LOGBOOK ENTRIES AS REQUIRED.

**SYSTEM:** NAVIGATION **ICR NUMBER:** **G**
**SUBSYSTEM:** GYRO COMPASS **11**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 164.35
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify an illuminated gyro compass or repeater is operating properly and visible from the main steering station.

B. Verify the master gyro compass is operating and secured properly. Verify accuracy with an alternate and reliable means.

C. Verify accuracy of all gyro repeaters.

---

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI/COTP. NOTE IN DEFICIENCY LOG.

**SYSTEM:** NAVIGATION EQUIPMENT **ICR NUMBER:** **G**
**SUBSYSTEM:** MISCELLANEOUS SHIP CONTROLS **12**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify bow and stern thruster controls work as designed:
   1. Verify alarms and indicators function properly.
   2. Diesel Units - Verify RPMs synchronized with pitch.
   3. Electric Units - Verify electrical current requirements and alarms function as designed.
   4. Verify emergency shutdowns function from the pilot house.
   5. Verify all required controls, such as vent fans, are controlled and indicated as designed.

---

## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND CORRECTIVE ACTION IN A TIMELY MANNER.

**SYSTEM:** NAVIGATION **ICR NUMBER:** **G**
**SUBSYSTEM:** STEERING - BRIDGE EQUIPMENT **13**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 97.15-3, 97.37-33, 97.37-35, 111.93, 113.43, 33 CFR 164
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify each station, in each available mode, operates smoothly from hard port to hard starboard.

B. Verify rudder angle indicators are functional and synchronized both in the pilot house and on the steering gear flat, as well as any other locations where provided.

C. Verify all indicator lights and alarms function in the pilot house.

D. Verify mode changes can be accomplished without uncontrolled movement of the rudder.

E. Verify the required block diagram and instructions for steering system change over is posted in the pilot house and accurately reflects the installation.

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## DEFICIENCY ACTION

MAKE CORRECTIVE REPAIRS PRIOR TO OPERATING. IF UNABLE TO DO SO, CONTACT THE COGNIZANT OCMI. NOTE IN DEFICIENCY LOG.

**SYSTEM:** DECK MACHINERY **ICR NUMBER:** **H**
**SUBSYSTEM:** GROUND TACKLE **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 92.25-15, 96.07, ABS Sect 28
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify anchors are installed in accordance with the ABS rules for class and size.

B. Visually examine the windlass(es) for damaged or broken components or excessive corrosion. Ensure machinery guards are in place where required.

C. Verify the electrical controls are watertight, with no loose wires. Verify electrical insulation is intact.

D. Verify pneumatic/hydraulic lines and connections are tight (as applicable).

E. Verify the machinery foundations are sound, and mounting bolts and welds are tight, with no evidence of metal fatigue or fractures.

F. Operationally test windlass(es). Ensure all controls are free and working properly and are being properly maintained.

G. Check the operation of the brake by stopping the “free fall” of the anchor(s). Test the remote actuators and controls, as equipped.

## DEFICIENCY ACTION

MAKE APPROPRIATE REPAIRS IN A TIMELY MANNER. NOTE IN DEFICIENCY LOG.

**SYSTEM:** DECK MACHINERY **ICR NUMBER:** **H**
**SUBSYSTEM:** HATCH CRANE **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 90.35, 92.25-15
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Inspect for structural defects.

B. Inspect deck rails for fractures or damage.

C. Examine lift cables for excessive wear or corrosion.

D. Examine internal combustion engines for fuel and oil leaks.

E. Examine electrical system for cables cracks and wear. Ensure strain relief devices are in good condition.

F. Verify proper functioning of all controls and brakes.

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## DEFICIENCY ACTION

MAKE APPROPRIATE REPAIRS IN A TIMELY MANNER. NOTE IN DEFICIENCY LOG.

| | | | |
|---|---|---|---|
| **SYSTEM:** | DECK MACHINERY | **ICR NUMBER:** | **H** |
| **SUBSYSTEM:** | STORES DAVITS, MISCELLANIOUS WEIGHT HANDLING EQUIPMENT | | **04** |

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Inspect for structural defects.
B. Examine foundations for cracks, corrosion, or flexing of deck plating.
C. Examine cables and lines for wear or abrasion.
D. Verify stops in place and functioning properly.
E. Examine sheaves for wear and corrosion.
F. Examine control systems for:
    1. Electrical cable deterioration
    2. Proper operation of all switches
    3. Hydraulic lines free of damage or wear
    4. Proper operation of all controls

## DEFICIENCY ACTION

MAKE APPROPRIATE REPAIRS IN A TIMELY MANNER. NOTE IN DEFICIENCY LOG.

**SYSTEM:** DECK MACHINERY **ICR NUMBER:** **H**
**SUBSYSTEM:** WINCHES AND MOORING SYSTEMS **05**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 90.35, 92.25-15
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify bits, cleats, chocks and fairleads are not excessively grooved or corroded, and are free of scale.

B. Verify rolling chocks and fairleads are being properly maintained.

C. Verify all foundations are sound with no evidence of fatigue or fractures.

D. Ensure all guy wires are taut, and turnbuckles and other hardware is in good operating condition.

E. Ensure wire ropes are free of excessive fishhooks and corrosion.

F. Powered Winches:

1. Verify machinery guards are in place where required.
2. Verify electrical controls are weathertight with no loose wires, and electrical insulation is intact.
3. Verify hydraulic/pneumatic lines and connections are tight with no evidence of overtightening.
4. Verify dogs and brakes function and operate with ease.
5. Verify controls work properly.
6. Check each unit to ensure they are free of excessive corrosion and are being properly maintained.

## DEFICIENCY ACTION

MAKE APPROPRIATE REPAIRS IN A TIMELY MANNER. NOTE IN DEFICIENCY LOG.

**SYSTEM:** HULL, MISCELLANEOUS **ICR NUMBER:** I
**SUBSYSTEM:** WATERTIGHT DOORS 01

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

HINGED-TYPE WATERTIGHT DOORS

A. Ensure knife edges are intact and not warped or corroded and do not have excessive paint buildup.
B. Ensure gasket material is intact, continuous, and still pliable.
C. Ensure door closes completely around entire perimeter and gasket makes contact with knife edge (chalk test as necessary).
D. Examine all hinges and hardware for general condition, wear, fit, etc.
E. Ensure that all dogs are operable and grease fittings still work.
F. Check wedges on door frame for excessive wear and that catch-up with dogs is adequate.
G. Test operation of quick action closing device from both sides.
H. Ensure markings are clearly legible in a minimum of 1” high letters on both sides with “WATERTIGHT DOOR - KEEP CLOSED”.
I. Verify proper operation of door status indicator lights in the pilot house.

## DEFICIENCY ACTION

REPLACE DETERIORATED/WORN GASKET, DOGS, PINS, ETC. ON HINGED DOORS. IF UNABLE TO DO SO PRIOR TO OPERATION, CONTACT COGNIZANT OCMI.

**SYSTEM:** HULL, MISCELLANEOUS **ICR NUMBER:** **I**
**SUBSYSTEM:** WATERTIGHT DOORS **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

SLIDING-TYPE WATERTIGHT DOORS

A. Test operation of door locally (both sides) by manual power and also hydraulic or electric power if so fitted.
B. Test operation of door from remote manual location and verify door status indicator at the same location.
C. Test operation of door from bridge panel (close/reset only).
D. Verify operation of door status indicator on bridge (open/closed).
E. Ensure operation of local audible alarm when door is in motion.
F. Test operation of power operated doors on emergency generator power.
G. Examine metal to metal sealing surfaces for nicks, dents or other obstructions.
H. Ensure all door guides and channels are free from debris and other obstructions.
I. Ensure markings are clearly legible in a minimum of 1” high letters on both sides with “WATERTIGHT DOOR - KEEP CLOSED”.

## DEFICIENCY ACTION

REPLACE DETERIORATED/WORN GASKET, DOGS, PINS, ETC. CONSULT MANUFACTURER'S INSTRUCTIONS FOR REPAIR/ADJUSTMENTS TO SIDING WATERTIGHT DOORS. IF UNABLE TO DO SO PRIOR TO OPERATING, CONTACT COGNIZANT OCMI

**SYSTEM:** HULL, MISCELLANEOUS **ICR NUMBER:** **I**
**SUBSYSTEM:** HULL MARKINGS **12**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER, ABS SURVEYOR
**REFERENCES:** 46 CFR 43.13-40, 45, 67.15
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify load line and hull markings are permanently affixed to vessel and readable.

B. Verify draft marks are six-inch letters on port and starboard sides of the bow and stern.

C. Vessel name is on the bows, and name and hailing port on the stern in four inch letters.

D. Vessel official number is not less than three inches high located on main beam or other clearly visible interior structural part of the hull.

## DEFICIENCY ACTION

REPLACE DETERIORATED/WORN GASKET, DOGS, PINS, ETC. CONSULT MANUFACTURER'S INSTRUCTIONS FOR REPAIR/ADJUSTMENTS TO SIDING WATERTIGHT DOORS. IF UNABLE TO DO SO PRIOR TO OPERATING, CONTACT COGNIZANT OCMI

**SYSTEM:** HULL, MISCELLANEOUS **ICR NUMBER: I**
**SUBSYSTEM:** HATCHES AND DOORWAYS **13**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 92.10
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify all escape hatches and doorways are clearly marked “EMERGENCY EXIT - KEEP CLEAR” on both sides.

B. Verify there are no locks or obstructions.

C. Verify closure devices operate freely from both sides.

---

## DEFICIENCY ACTION

REMARK AS NEEDED. REMOVE UNAUTHORIZED LOCKS. REPAIR OR REPLACE INOPERABLE CLOSURE DEVICES. NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** GALLEY EQUIPMENT **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 58.16, 111.60, 111.77, 113.45
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify refrigeration equipment is operating properly, maintaining proper temperatures, and alarms and latches function properly (walk-in units).

B. Electrical:

1. Verify equipment is properly mounted to prevent dislodgment by vessel motion.
2. Inspect all plugs and cords for damage.
3. No extension cords are in use.
4. Verify all equipment is clean, free of grease and debris, and operating properly.

## DEFICIENCY ACTION

REPAIR DEFECTIVE EQUIPMENT AND NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** WASHROOMS AND TOLIET ROOMS **04**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 91.35, 92.20
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify bulkheads, ceilings and decks are intact and draining properly.

B. Verify the showers, toilets and sinks operate without leakage, and the drains are not restricted.

C. Ventilation and heating adequate.

D. Spaces adequately lit.

E. Verify spaces are maintained in clean and sanitary condition.

F. Verify lighting fixtures and switches are in proper repair.

## DEFICIENCY ACTION

REPAIR DAMAGED BULKHEADS, CEILINGS OR DECKS. REPAIR CLOGGED OR RESTRICTED DRAINS. REPAIR OR REPLACE DEFECTIVE LIGHT FIXTURES AND SWTICHES. NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** LAUNDRY FACILITIES **06**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 91.35, 92.20-40
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Equipment:

1. Verify washers and dryers are adequately secured to withstand vessel motion.
2. Verify wiring and piping are adequate and the units are properly grounded.
3. Verify venting of the dryer is safe and sanitary, and prevents the escape of lint into the equipment or vessel interior.
4. Verify the laundry space is fitted with a tub or sink, equipped with hot and cold running water.
5. Verify all equipment is properly operating and in a sanitary condition.

## DEFICIENCY ACTION

SECURE LOOSE EQUIPMENT. REPAIR DAMAGED VENTS. NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** STATEROOMS **07**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 92.05, 92.20, 111.75
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Construction:
   1. Verify bulkheads, ceilings, and decks are intact, and coated with paint or other suitable covering.
   2. Spaces are properly maintained in a sanitary condition, free of moisture and debris.
   3. Verify structural fire protection has not been compromised by unauthorized or improper modifications.
   4. Verify no carpeting not meeting current flame safety standards has been installed.
   5. Suitable accommodations are provided for each person assigned to the vessel.
   6. Verify bunks and lockers are in place, properly secured and in good repair.

B. Lighting:
   1. Spaces are adequately lighted with proper fixtures, proper size bulbs, and maintained in good repair.
   2. Verify each berth has alight with a properly sized bulb, not wired with a flexible cord and so arranged as to protect the bulb from being covered with bedding.
   3. Verify no unauthorized or improper modifications have been made to the wiring.

## DEFICIENCY ACTION

REMOVE UNAUTHORIZED ITEMS, REPAIR INOPERABLE EQUIPMENT AND NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** STATEROOMS **07**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 92.05, 92.20, 111.75
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

C. Ventilation:

1. Verify the heating and ventilation system works properly, and grillwork and ductwork are in good condition without improper or unauthorized modification.
2. Verify temperatures are being maintained, suitable for the use of the space.
3. Radiators and registers are insulated to avoid risk of fire or personal injury to occupants.
4. Private/semi-private washrooms and toilet rooms are adequately ventilated to remove moisture and odors.

D. Plumbing:

1. Verify proper drainage from sinks and deck drains, as well as toilets and showers is provided.
2. Verify hot and cold running water is provided, and fixtures are free of leakage.
3. Verify toilet flushing action is adequate.

## DEFICIENCY ACTION

REMOVE UNAUTHORIZED ITEMS, REPAIR INOPERABLE EQUIPMENT AND NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** GALLEY **08**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 91.35,992.05, 92.15, 92.20
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Mess Rooms:
   1. Verify seating and tables properly arranged and secured.

B. Ventilation:
   1. Verify operation of ventilation system and remote stop actuators.
   2. Ensure vent screens and duct work is free of grease and residue.

C. Verify no changes affecting the structural fire protection have been made.

D. Lighting fixtures and switches are in proper repair.

E. Galley, messroom(s), refrigeration and pantry spaces free of debris, clean and in a sanitary condition.

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## DEFICIENCY ACTION

REPAIR LOOSE SEATS AND TABLES, REPAIR REMOTE STOPS AND NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** PAINT LOCKERS **09**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 91.25-10, 92.05-10
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify that the space is safe and free from fire hazards

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## DEFICIENCY ACTION

REMOVE FIRE HAZARDS.

**SYSTEM:** ACCOMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** EMBARKATION AIDS **10a**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 94.150, 94.50-15, 160.017
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Ladders:

1. Verify ladders are approved type II, chain suspension construction.
2. Check all rungs and connecting links for wear or corrosion.
3. Examine tie off points on the vessel for defect or deterioration. Examine ladder shackles for wear or deterioration.
4. Verify all rungs are in serviceable condition, free of damage or deterioration.
5. Verify ladders are kept ready and convenient for use on the lifeboat deck, and shall reach from the deck to the vessel's light waterline with no heel assumed.
6. Verify adequate number of ladders are provided for lifeboat and liferaft embarkation.

B. Illumination:

1. Verify operation of lighting at all lifeboat and liferaft embarkation areas, and test on emergency power.
2. Verify adequate condition of all moving parts, and ensure they are free of corrosion and deterioration.
3. Verify wiring is in sound condition.

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## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND MAKE REPAIRS IN A TIMELY MANNER.

**SYSTEM:** ACCOMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** RAILS AND GUARDS **10b**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 92.25-15
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify suitable hand covers, guards or rails are installed, and free of defect or corrosion in way of all exposed or dangerous locations.

B. Verify deck railings and ladder rails, treads and supports are free of corrosion or damage. Verify tread wear has not caused any slippery conditions.

## DEFICIENCY ACTION

REPLACE DETERIORATED/DAMGED/ MISSING RAILS OR GUARDS AND NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** STOREROOMS AND GEAR LOCKERS **12**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR 92
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify spaces are adequately lighted.

B. Verify fixtures and wiring are adequate, and globes and guards of the proper classification are in place.

C. Verify all flammable, combustible, or explosive materials are properly stowed in an appropriate, approved locker.

D. Verify there is no accumulation of dirt, debris, or containers of oily or paint soaked rags.

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## DEFICIENCY ACTION

REPAIR OR REPLACE FIXTURES AND GUARDS. CLEAN SPACE OF ANY DEBRIS OR ACCUMULTIONS OF RAGS. NOTE IN DEFIECENCY LOG.

**SYSTEM:** ACCOMODATIONS **ICR NUMBER:** **J**
**SUBSYSTEM:** ELEVATORS **13**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER
**REFERENCES:** 46 CFR
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A.

B.

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## DEFICIENCY ACTION

REPLACE DETERIORATED/DAMGED/ MISSING RAILS OR GUARDS AND NOTE IN DEFIECENCY LOG.

**SYSTEM:** LIFESAVING **ICR NUMBER:** **K**
**SUBSYSTEM:** ABANDON SHIP DRILL **1a**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 199.180
**REGULATORY INSPECTION FREQUENCY:** WEEKLY

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## INSPECTION CRITERIA

A. Conduct drill as if an actual emergency exists, using emergency communications and signals.

B. All hands shall report to their stations and be prepared to perform their duties as specified on the station bill.

C. Weather permitting, remove the lifeboat cover and strongbacks, install plugs or caps, secure boat ladders in position, and lead the painters forward and tend them. The boat should be lowered at each drill if possible and the crew exercised at oars, or the diesel engine operated ahead and astern. NOTE: The boat must be lowered to the water at least once every three months.

D. Operate all engines (if equipped) for at least five minutes.

E. Examine the lifeboat lowering equipment.

F. Exposure Suits:

1. Each crew member must don an exposure suit at least one time each month.
2. Instruction in the use and donning of the suits shall be provided.
3. Each crew member shall carefully inspect his/her assigned suit for flaws or defects and report any problems immediately to the master or designated representative, who shall take immediate corrective action.

G. Liferafts:

1. Ensure all personnel know their raft assignments.
2. Discuss launching and boarding procedures.

H. Log all drills, boats to the water, and motor lifeboats operated in the ship's log.

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## DEFICIENCY ACTION

NOTE IN DEFIENCY LOG AND TIMELY CORRECTIVE ACTION

**SYSTEM:** DRILLS AND TRAINING **ICR NUMBER:** **K**
**SUBSYSTEM:** FIRE DRILLS **1b**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 97.15
**REGULATORY INSPECTION FREQUENCY:** WEEKLY

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## INSPECTION CRITERIA

A. Conduct drill as if an actual emergency exists.
B. All hands report to stations with equipment in accordance with the station bill, prepared to perform their respective duties.
C. Fire pumps shall be started. At least two hose outlets, widely separated, shall be utilized to ensure system performance.
D. All rescue and safety equipment shall be brought out from the emergency gear lockers and the designated persons shall demonstrate their ability to use the equipment.
E. A discussion/training session of all fire fighting capabilities applicable to this particular drill shall be presented to the crew. The scenario must change frequently to ensure all firefighting systems are covered periodically.
F. When practical, secure all power at the drill location. Demonstrate operation of watertight doors and establish fire boundaries. Secure ventilation.
G. Personnel casualties shall be simulated with emphasis on first aid and evacuation procedures.
H. Special emphasis must be given to performing the drill in a safe and effective manner.

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## DEFICIENCY ACTION

NOTE IN DEFICIENCY LOG AND CONDUCT TRAINING AND DRILLS AS NEEDED TO ENSURE CREW ABLE TO COMBAT A REAL EMERGENCY SITUATION.

**SYSTEM:** AUXILIARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** AUTOMATION **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED ENGINEER or his designated representative
**REFERENCES:** 46CFR 61.35-1, 61.35-3, 63.15-7, 63.15-9
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Conduct tests of the following safety devices:
   1. Low water cut-out trip and alarm.
   2. Flame failure cut-out and alarm.
   3. Operation of all pressure controls.
   4. Low stream alarm.
   5. Pre-purge and post-purge interlocks.

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## DEFICIENCY ACTION

REPLACE OR REPAIR ITEM. NOTIFY OCMI.

**SYSTEM:** AUXILLARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** HYDROSTATIC TESTS **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05 & 61.15, 63.15-9
**REGULATORY INSPECTION FREQUENCY:** EVERY FIVE YEARS OR AFTER REPAIRS

| **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector or ABS |
|---|

## INSPECTION CRITERIA

A. Ensure safety valves are secured by gags or clamps.
B. Verify water temperature is correct:
   1. Watertube = not less than 70° F. and not more than 160° F
   2. Firetube = not more than 100° F
C. Verify appropriate test pressure:
   1. Watertube = 1.25 MAWP
   2. Firetube = 1.5MAWP
   3. Repairs = 1.5 MAWP
D. Test all piping from the boiler drum to the first valve subject to boiler pressure.
E. Examine fireside and external components during test.

| **NOTE:** Any leaks to be repaired "After" pressure is released from boiler or piping. |
|---|

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM PRIOR TO OPERATION.

**SYSTEM:** AUXILLARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** INTERNAL INSPECTIONS **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05-10, 61.05-59
**REGULATORY INSPECTION FREQUENCY:** TWICE IN 5 YEARS, NOT MORE THAN 3 YEARS BETWEEN ANY INSPECTION.

> **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector or ABS

## INSPECTION CRITERIA

A. Open access to steam and water drums.

B. Inspect furnace, this can be conducted in conjunction with a required hydrostatic test.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM PRIOR TO OPERATION.

**SYSTEM:** AUXILLARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** COLUMNS AND GUAGES **04**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05-15
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Examine water columns, gauge cocks, gauge glasses and steam gauges. Ensure accuracy of gauges.

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## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED.

**SYSTEM:** AUXILLARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** REMOTE SHUTDOWNS **05**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 58.01-25, 61.20-3, 95.15-35, 111.103-9
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Demonstrate operation of breakglass switches.

B. Demonstrate operation of CO2 trip switches to ventilation and auxiliary boilers.

C. Ensure proper markings of remote shutdown switches.

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## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED.

**SYSTEM:** AUXILLARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** MOUNTS OPENED **06**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER AND/OR ABS REPRESENTATIVE
**REFERENCES:** 46 CFR 61.05-15
**REGULATORY INSPECTION FREQUENCY:** FIVE YEARS (VALVES)

| **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. |
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## INSPECTION CRITERIA

A. Each valve subject to direct boiler pressure shall be opened for examination.

B. Examine the valves for the following:

1. Seat- no grooves, gouges, pitting, corrosion or scale.
2. Disc- no grooves, gouges, pitting, corrosion or scale
3. Stem- check for free operation, straightness and wear
4. Integrity of valve body- check for guide and body wear
5. Condition of stem packing gland- check for wear/distortion and install new packing
6. Gland ring bolts- check for stretched, bent, or broken bolts

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM ENSURE IT IS WORKING PROPERLY.

**SYSTEM:** AUXILLARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** MOUNTS INSPECTED **07**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER AND/OR ABS REPRESENTATIVE
**REFERENCES:** 46 CFR 61.05-15
**REGULATORY INSPECTION FREQUENCY:** TEN YEARS

> **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector.

## INSPECTION CRITERIA

A. Each valve subject to direct boiler pressure shall be removed for examination

B. Examine all studs bolts for cracks, deterioration and necking down.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM WITH APPROVED GRADE MATERIAL.

**SYSTEM:** AUXILLARY STEAM **ICR NUMBER:** **L**
**SUBSYSTEM:** SAFETY VALVES **08**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 52.01, 52.01-55, 61.15-5
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY - FIRETUBE
COI - WATERTUBE

**NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector.

## INSPECTION CRITERIA

A. Witness the lifting and reseating of each safety valve:

1. Determine the MAWP (Maximum Working Pressure).
2. During the testing of the safety valve ensure that the valve is set no higher than the MAWP, but above the normal steaming range
3. Ensure that the "blow-down" range falls within 2-4% of the set pressure for each valve.
4. Ensure that there is no simmering or chattering during the lifting or reseating of any safety valve.
5. A Coast Guard Marine Inspector shall seal all safety valves.
6. Operationally test all hand relieving gear to ensure all safety valves work manually.
7. Examine all escape piping to ensure it's integrity and free from leaks.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM**: MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** EXTERNAL EXAMINATION OF BOILERS **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25, 61.01, 61.05, 61.10 AND 62
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

> **NOTE:** Annual examination to be witnessed by a Coast Guard Marine inspector and conducted during hydrostatic test

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## INSPECTION CRITERIA

A. Inner casing, outer casing and wind box:
   1. Examine all for distortion, bulging, fractures, burned and sagging areas.

B. Lagging:
   1. Examine for proper fit, condition, burned or missing sections, etc.
   2. Check for exhaust leaks around flanges on boiler and exhaust stacks under lagging joints.

C. Tank tops beneath boiler:
   1. Examine for corrosion, pitting, distortion, cleanliness of tank top and oil wetted areas (fracture indication).

D. Condition of foundation/sliding feet:
   1. Examine boiler foundation frames for corrosion, distortion and fractures.
   2. Examine sliding feet for alignment, binding, fractures, corrosion and cleanliness.

E. Headers/Handholes evidence of leakage:
   1. Externally examine headers and handholes for signs of leakage around gasket and welds.
   2. Internally examine for foreign objects and cracking around tubes.

F. Automation Test Procedures:
   1. Using approved automation test procedures, test all alarms and shutdowns.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**Subchapter I**

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** WATERSIDE EXAMINATION OF WATER TUBE BOILERS **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25, 61.05, 10
**REGULATORY INSPECTION FREQUENCY:** TWICE IN FIVE YEAR PERIOD

| **NOTE**: Examination to be witnessed by a Coast Guard Marine Inspector. |
|---|

## INSPECTION CRITERIA

A. Steam drum, mud drum, headers (waterwall, superheater) :
   1. Remove baffle plates in steam drum.
   2. Internally examine for fractures, missing/loose bolts or brackets, foreign objects and signs of corrosion, erosion and leakage.

B. Drum internals including :
   1. Dry pipe, examine for corrosion of pipe and support brackets.
   2. Main and chemical feed lines, examine for corrosion; hammer test flanged connections.
   3. Desuperheater and control desuperheater, examine for corrosion; hammer test flanged connections.
   4. Surface blow, examine connection for fractures and corrosion.
   5. Baffle plates, examine for fractures in plates and brackets/missing bolts.
   6. Tube sheet connections/ligament, examine for fractures and leaks.
   7. Connections and attachments, examine for fractures and pitting.
   8. Surface conditions, examine for scaling, pitting, corrosion, erosion and fractures.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** WATERSIDE EXAMINATION OF WATER TUBE BOILERS **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 119.220, 61.05, 10
**REGULATORY INSPECTION FREQUENCY:** TWICE IN FIVE YEAR PERIOD

| **NOTE**: Examination to be witnessed by a Coast Guard Marine Inspector. |
|---|

## INSPECTION CRITERIA

C. Verify number of tubes plugged, i.e.- Row 4, tubes 5,6&13, Stbd. steam drum.

D. Headers, (Remove every 5th hand hole cover):

1. Hand hole seats, examine seats in header and cover plates for corrosion, pitting and erosion.
2. Tube connections, with a light and mirror, examine tube connections for leakage and fractures
3. Welded connections, examine for fractures and erosion.
4. Division plates, examine for fractures and erosion.
5. Surface conditions, examine header for pitting, erosion, scaling and foreign debris, (ie; gasket pieces).

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** FIRESIDE EXAMINATION OF WATER TUBE BOILERS **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05, 91.25
**REGULATORY INSPECTION FREQUENCY:** TWICE IN FIVE YEAR PERIOD

**NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. Boiler to be at 1.25 MAWP (Hydro Pressure for this examination)

## INSPECTION CRITERIA

A. Brick work:
   1. Examine for loose, broken, missing or eroded bricks. Repair as needed.
   2. Examine floors for heaving, excess slag build-up.

B. Corbel:
   1. Examine for loose, broken or missing corbel (Burner cones).

C. Waterwall, screen, generating, and floor tubes : (if fitted) :
   1. Examine for sagging and blistering, married and burned out tubes.

D. Superheater tubes and supports:
   1. Examine for sagging and blistering, married and burned out tubes.
   2. Examine for burned out supports that cause sagging sections of tubes.

E. Burner:
   1. Examine for excess slag build-up (indication of dribbling nozzle).
   2. Examine for fractures in the air registers and diffusers.
   3. Externally examine for fuel leakage.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** FIRESIDE EXAMINATION OF WATER TUBE BOILERS **03**

## AUTHORIZATION

AUTHORIZED INSPECTOR: LICENSED OFFICER or his designated representative
REFERENCES: 46 CFR 61.05, 91.25
REGULATORY INSPECTION FREQUENCY: TWICE IN FIVE YEAR PERIOD

**NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. Boiler to be at 1.25 MAWP (Hydro Pressure for this examination)

## INSPECTION CRITERIA

F. Amount of slag accumulation:
   1. Internally examine for excessive slag build-up on tubes, brick work and corbel. (This causes poor heat transfer, loss of efficiency and internal damage).

G. Uptake and economizer:
   1. Examine for excessive soot accumulation on tubing fins.
   2. Examine for fractures, corrosion and exhaust leaks.

H. Soot blowers:
   1. Examine for proper operation, leaks, fractures or excessive soot deposits.

I. Air heaters:
   1. Examine for soot build up, leaks and unrestricted operation.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** MAIN PROPUSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** FIRESIDE EXAMINATION OF FIRE TUBE BOILERS **04**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05, 59.15-1, 91.25
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY IF ≥ 150psi / TWICE IN FIVE-YEAR PERIOD IF < 150psi

> **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. Boiler to be at 1.5 x MAWP. (Hydro pressure for this examination.)

## INSPECTION CRITERIA

A. Furnace (distortion):
   1. Measure with a tram bar to detect distortion.
   2. Repair as needed as per 46 CFR 59.15-1(a) or 46 CFR 59.15-1(c).

B. Combustion chamber: (crown sheet, wrapper sheet, back sheets) (distortion).

C. Boiler shell and heads :
   1. All portable sections and any suspect or wet areas of lagging shall be removed while boiler is under hydrostatic pressure to determine the source of leaks.
   2. Examine shell and heads for corrosion and wastage.

D. Stay bolts:
   1. Examine for corrosion, wastage and necking.

E. Riveted seams and rivets (if applicable):
   1. Examine for stress corrosion cracking around rivets, especially around loose or missing rivet holes.
   2. Examine for leakage at seams and rivets.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** MAIN PROPUSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** FIRESIDE EXAMINATION OF FIRE TUBE BOILERS **04**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05, 59.15-1, 91.25
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY IF ≥ 150psi / TWICE IN FIVE-YEAR PERIOD IF < 150psi

**NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. Boiler to be at 1.5 x MAWP. (Hydro pressure for this examination.)

## INSPECTION CRITERIA

F. Boiler saddles and foundations :
   1. Hammer test saddles, collision chocks, and foundation to detect deterioration.

G. Plating in way of mountings : (wastage due to leaking valves and fittings).
   1. Examine for wastage due to leaks from mounts.

H. Cracks in the plating due to flexing of the heads or leakage :
   1. Cracks, wastage or evidence of leaks shall require further examination of the inside of the head.

I. Wastage around the manhole gaskets :
   1. Examine for corrosion or wastage due to gasket leaks.

J. Note heat number and condition (SAT/UNSAT) of fusible plugs.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** WATERSIDE EXAMINATION OF FIRE TUBE BOILERS **05**

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## AUTHORIZATION

AUTHORIZED INSPECTOR: LICENSED OFFICER or his designated representative
REFERENCES: 46 CFR 59, 61.05, 91.25
REGULATORY INSPECTION FREQUENCY: ANNUALLY IF ≥ 150psi / TWICE IN FIVE-YEAR PERIOD IF < 150psi

| **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. |
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## INSPECTION CRITERIA

A. Straps and rivets attaching the heads to the shell: (if applicable).
   1. Sound or “ring” with hammer to check for tightness.
   2. NDT for cracks, any rivet holes with loose or missing rivets.

B. Necked stays, loose rivets, and fracture:
   1. Examine stays for corrosion, wastage and necking, renew as needed.
   2. Loose or missing rivets require NDT and repair as per 46CFR part 59.
   3. Fractures require NDT and repair as per 46CFR part 59.

C. Tubes : (Pitting- determine general depth and tube type).
   1. Examine for deep pits over a large area, shallow widely scattered pits over a large area can usually be disregarded.
   2. A distinction must be made between plain and stay tubes, stay tubes have a greater initial wall thickness.

D. Internal surface conditions : (scaling, pitting, corrosion and erosion).
   1. Examine for excessive scale, small amounts are common.
   2. Examine for corrosion and erosion to plating due to leaks, defective internal feed line gaskets are a frequent cause.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** BOILER MOUNTS (open/inspect) **06**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05-15, 91.25
**REGULATORY INSPECTION FREQUENCY:** FIVE YEARS (VALVES) TEN-YEARS (BOLTS AND MOUNTINGS)

| **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. |
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## INSPECTION CRITERIA

A. Each valve shall be opened for examination. If the valve can not be satisfactorily examined in place it must be removed for examination. The following is summary of the valves requiring examination:

1. Main steam stop valve
2. Generator steam stop valve
3. Auxiliary steam stop valve
4. Main and auxiliary feed stop valves
5. Surface and bottom blowdown valves
6. Superheater vent valve
7. Superheater drain valve
8. Soot blower stop valve
9. Economizer inlet and outlet valves

B. Examine the valves for the following:

1. Seat- no grooves, gouges, pitting, corrosion or scale
2. Disc- no grooves, gouges, pitting, corrosion or scale
3. Stem- check for free operation, straightness and wear
4. Integrity of valve body- check for guide and body wear
5. Condition of stem packing gland- check for wear/distortion and install new packing
6. Gland ring bolts- check for stretched, bent, or broken bolts

C. Examine all studs bolts for cracks, deterioration and necking down.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM ENSURE IT IS WORKING PROPERLY.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** HYDROSTATIC TEST **07**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.05 & 61.15, 91.25
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY - FIRETUBE PROPULSION TWICE IN FIVE YEARS – OTHERS EVERY FIVE YEARS - PIPING

> **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector.

## INSPECTION CRITERIA

A. Conduct tests in conjunction with required fireside exam.

B. Ensure safety valves are secured by gags or clamps.

C. Verify water temperature is correct:

1. Watertube = not less than 70° F. and not more than 160° F
2. Firetube = not more than 100° F

D. Verify appropriate test pressure:

1. Watertube = 1 ¼ MAWP
2. Firetube = 1 ½ MAWP

E. Test all main steam piping from the boiler drum to the throttle. No piping with a nominal size of 3” or less need be tested.

1. Verify appropriate test pressure = 1¼ MAWP
2. The test pressure is held for a minimum of 10 minutes.

F. Examine all tube joints, header connections and handhole plates for leakage.

> **NOTE:** Any leaks to be repaired "After" pressure is released from boiler or piping.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** SAFETY VALVES **08**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 52.01-120, 61.05-20 AND 52.01-55, 91.25
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY – FIRETUBE
COI – WATERTUBE

| **NOTE:** Examination to be witnessed by a Coast Guard Marine Inspector. |
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## INSPECTION CRITERIA

A. Witness the lifting and reseating of each safety valve for the drum, superheater, or reheater of a boiler:

1. Determine the MAWP (Maximum Working Pressure). This can be found on the Certificate of Inspection.
2. During the testing of the safety valve ensure that the valve is set no higher than the MAWP, but above the normal steaming range
3. Ensure that the superheater safety valve is set correctly in relation to the drum safety valve. The drum safety has the highest setting followed by the superheater safety (1) or safeties (2) and the pilot operated safety valve if installed.
4. Ensure that the "blow-down" range falls within 2-4% of the set pressure for each valve, but not falling into the steaming range of the boiler.
5. Ensure that there is no simmering or chattering during the lifting or reseating of any safety valve.
6. A Coast Guard Marine Inspector shall seal all safety valves.
7. Operationally test all hand relieving gear to ensure all safety valves work manually.
8. Examine all escape piping to ensure it's integrity and free from leaks.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** FEEDWATER SYSTEM **10**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 56.50-30, 56.50-35,.56.50-45, 62.25, 62.30, 91.25-10
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

## INSPECTION CRITERIA

A. Pumps:

1. Verify all feed water pumps, including condensate, chemical feed, and any circulating pumps, are installed in accordance with, or equal to, the original approved plans. Ensure any changes to these systems are supported by USCG or ABS approved drawings.
2. Verify all relief devices function as designed at the pressures required in the manufactures boiler operating manual.
3. Verify the steam operated pumps, steam sides, have properly operating relief valves set no greater than the pressures recommended in the pump manufactures operating manual.
4. Test installed overspeed trip devices. Verify operation in accordance with the pump manufactures instructions.
5. Verify all controls, valves both automatic and manual, and installed governing mechanisms operate properly.
6. Verify pump couplings are tight, operating within acceptable wear limits, and rotating machinery guards are properly installed.
7. Verify packings and mechanical seals are adjusted properly and free of excessive leakage.
8. Verify all relief piping is intact, free of unauthorized stop valves, and routed to prevent personnel injury.
9. Verify pressure/vacuum gauges, flow indicators and level indicators are functioning correctly and within acceptable calibration limits.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY. ANY ALTERNATIONS TO APPROVED SYSTEMS MUST HAVE APPROVAL FROM USCG OR ABS BEFORE STARTED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** FEEDWATER SYSTEM **10**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 56.50-30, 56.50-35,.56.50-45, 62.25, 62.30, 91.25-10
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

## INSPECTION CRITERIA

B. Piping:

1. Verify piping has not been improperly modified, causing deviations from approved plans and materials, and if modifications have been completed, approved USCG/ABS plans are provided, and testing has been completed and documented.
2. Visually examine all feedwater piping for excessive corrosion or visual defect.
3. Verify all thermal protective material (lagging) is installed and in serviceable condition. Damage to composite lagging must be repaired and sealed.
4. All stop and check valves shall be determined to be operating properly by any acceptable method. Detail the test/verification procedure utilized in the "REMARKS" .
5. Verify boiler "MOUNTINGS" 5 and 10 year examinations are current.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY. ANY ALTERNATIONS TO APPROVED SYSTEMS MUST HAVE APPROVAL FROM USCG OR ABS BEFORE STARTED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** MAIN ENGINE TURBINES **11**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 56.50-80, 61.15-12, ABS Part 33
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

## INSPECTION CRITERIA

A. Verify the lube oil pumps operate properly.

B. Verify seals and packing are free of excessive leakage.

C. Examine the lube oil coolers and verify proper leak free operation.

D. Test auto start of the standby oil pump. Verify on loss of pressure the standby pump comes on line at proper pressure and the installed alarms and indicators function correctly.

E. Test the low lube oil shutdown to the turbines in accordance with the manufactures instructions.

F. Test the turbine sentinel valves in accordance with the manufactures instructions.

G. Examine the main condenser and circulating pumps for proper operation and absence of leaks.

H. Examine all non-metallic expansion joints.

I. Test the propulsion plant ahead and astern. Verify the indicators and alarms function properly. Coordinate the test with the pilothouse and test the engine order telegraph. Verify there are no hang ups, and the telegraphs show the same positions and audible signals are working correctly.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY. ANY ALTERNATIONS TO APPROVED SYSTEMS MUST HAVE APPROVAL FROM USCG OR ABS BEFORE STARTED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER: M**
**SUBSYSTEM:** MAIN ENGINE TURBINES **11**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 56.50-80, 61.15-12, ABS Part 33
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

## INSPECTION CRITERIA

J. Verify the engine order telegraph failure alarm functions properly, and is clearly labeled.

K. Inspect the throttle valves and associated linkages for damage, excessive wear, interferences or other defects.

L. Examine the foundations and mountings for all equipment.

M. Examine the line shaft bearings for proper lubrication.

N. Examine shaft couplings. Check bolts.

O. Examine shaft sealing mechanism for proper sealing.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY. ANY ALTERNATIONS TO APPROVED SYSTEMS MUST HAVE APPROVAL FROM USCG OR ABS BEFORE STARTED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** INSULATION **12**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 56.50-1, 91.25-35
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Inspect all steam piping and machinery insulation to ensure it is intact, all wire hooks/ wire and blankets (if installed) are in place to minimize the risk of personnel hazards.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS APPRORIATE.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** ESCAPE PIPING **13**

---

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 56.50-25(b)
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Examine all drains for freedom from debris and obstruction.

B. Examine piping for corrosion and wastage.

C. Ensure no stress from piping and that piping is no resting against valves.

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## DEFICIENCY ACTION

CORRECT OR REPAIR ANY COMPONENT AS REQUIRED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** BLOWOFF VALVES AND PIPING **14**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 56.50-40(a)
**REGULATORY INSPECTION FREQUENCY:** BIENNIAL

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## INSPECTION CRITERIA

A. Examine all valves and pipes for corrosion and wastage.

B. Verify no globe valves are used.

C. Verify non-return valve installed in each line from boiler.

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## DEFICIENCY ACTION

CORRECT OR REPAIR ANY COMPONENT AS REQUIRED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** UPTAKES **15**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative, Coast Guard and/or ABS Inspector
**REFERENCES:** 46CFR 52.01-130
**REGULATORY INSPECTION FREQUENCY:** TWICE IN 5 YEARS WITH MAXIMUM 36 MONTH INTERVAL

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## INSPECTION CRITERIA

A. Verify no obstructions in the gas passages.

B. Verify operation of air heater by-pass dampers.

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## DEFICIENCY ACTION

CORRECT OR REPAIR ANY COMPONENT AS REQUIRED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** FUEL SYSTEM **16**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 56.50-65, 56.50-85, 58.01-25
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Examine and verify operation of pumps and heaters.

B. Examine drip pans, guards and flange shields.

C. Verify operation of remote shutdowns.

D. Examine duplex filters and verify operation of valves.

---

## DEFICIENCY ACTION

CORRECT OR REPAIR ANY COMPONENT AS REQUIRED.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** AUTOMATION SYSTEM **17**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 61.40-1, 61.40-6, 62.25-20, 62.25-25, 62.35-20
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Conduct tests in accordance with Coast Guard approved automation test procedures.

B. Verify no alterations to system, unless Coast Guard approved..

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## DEFICIENCY ACTION

CORRECT OR REPAIR ANY COMPONENT AS REQUIRED. NOTIFY OCMI OF INOPERABLE SYSTEMS PRIOR TO OPERATION OF VESSEL.

**SYSTEM:** MAIN PROPULSION – STEAM **ICR NUMBER:** **M**
**SUBSYSTEM:** COLUMNS AND GUAGES **18**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 52.01-110(b), 61.05-10, 61.05-15 (e)(f), 61.35-1(c)
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Examine water columns, gauge cocks, gauge glasses and steam gauges. Ensure accuracy of gauges.

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## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED.

**SYSTEM:** MAIN PROPULSION DIESEL **ICR NUMBER:** **N**
**SUBSYSTEM:** CONDITION & ENGINE INSTALLATION **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 58.05, 61.15-12, 611.20-3, 61.40, 91.25-10
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

## INSPECTION CRITERIA

A. Ensure flexible hoses (where installed) have not deteriorated or suffered mechanical damage. Double hose clamps are installed where required.

B. Examine all fuel supply and return piping, fittings and hoses for leaks, and signs of chafing.

C. Determine that all engine instruments/indicators function normally, without undue fluctuation, gage faces are clean and intact, properly labeled, calibrated, are visible, measure the value in a range useful to the operator.

D. Ensure all personnel safety devices (guards, rails, spray shields, insulation) are in place, properly maintained. Secured in the correct location and labeled, stenciled, or color coded as required.

E. Any location that poses a slip-trip-fall hazard, machine or equipment which may trap or ensnare a person or persons clothing must be immediately corrected.

F. Engine exhaust systems shall be inspected for leaks, wasted gaskets, loose, saturated, or missing lagging, proximity to combustible materials, overheating adjacent structures, and potential personnel injury in the event of accidental contact.

G. Verify adequate flow of cooling water through wet exhaust system.

H. Examine engine foundation and tank tops for signs of fatigue, stress, fractures, flexing while operating, indication of misalignment, and unusual noise and vibration.

I. Examine engine air intakes to ensure that devices are installed to prevent the entrance of harmful foreign materials and the device is in good repair.

J. Ensure crankcase vents are clear and that the accumulation of oil and vapors are contained and removed.

K. Ensure engine crankcase explosion covers are installed correctly and maintained in a serviceable condition.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS APPRORIATE.

**SYSTEM:** MAIN PROPULSION DIESEL **ICR NUMBER:** **N**
**SUBSYSTEM:** AIR START SYSTEMS **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 54, 61.10
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify all valves, gauges, and pressure controls function as designed.

B. Test the relief valve by increasing the system pressure until the valve "pops" or the MAWP on the receiver is reached. NOTE: If the valve does not lift. The valve must be replaced or adjusted to lift at the specified pressure not to exceed that marked on the receiver data plate.

C. Examine accumulators to determine that the accumulator can be isolated. That it is protected on the gas and fluid side by relief valves set to relieve at pressures not to exceed the MAWP.

---

## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED.

**SYSTEM:** MAIN PROPULSION DIESEL **ICR NUMBER:** **N**
**SUBSYSTEM:** HYDRAULIC STARTING SYSTEMS **04**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 54, 58.30, 61.10,
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Examine hydraulic system with system under operating pressure. Verify that all joints, connections are tight and leak free. Examine non-metallic hoses for signs of chafing.

B. Verify system functions normally, accumulator recharges and all gauges, valves and controls function.

C. Examine accumulator for signs of leaks or physical damage.

## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED.

**SYSTEM:** MAIN PROPULSION DIESEL **ICR NUMBER:** **N**
**SUBSYSTEM:** ELECTRIC STARTING SYSTEMS **05**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 119.410, Part 183
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Ensure starting system wiring is properly supported, protected from chafing, and routed away from moving machinery.

## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED

**SYSTEM:** MAIN PROPULSION DIESEL **ICR NUMBER:** **N**
**SUBSYSTEM:** LOW LUBE OIL PRESSURE SHUTDOWN **07**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 58.05-10, Part 62
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify operation of the low lube oil trip device.

B. Verify that device activates at manufacturer's specifications.

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## DEFICIENCY ACTION

CORRECT OR REPAIR AS REQUIRED PRIOR TO OPERATION OF VESSEL.

| | | | |
|---|---|---|---|
| **SYSTEM:** | MAIN PROPULSION DIESEL | **ICR NUMBER:** | **N** |
| **SUBSYSTEM:** | AUTOMATED TEST PROCEDURES | | **08** |

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.40, Part 62
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Conduct the required tests and checks in accordance with the approved automation test procedure.

## DEFICIENCY ACTION

CORRECT OR REPAIR ANY COMPONENT AS REQUIRED. NOTIFY OCMI OF INOPERABLE SYSTEMS PRIOR TO OPERATION OF VESSEL.

**SYSTEM:** MAIN PROPULSION DIESEL **ICR NUMBER:** **N**
**SUBSYSTEM:** OVERSPEED SHUTDOWNS **09**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 58.05-10, Part 62
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify operation of the overspeed trip device.

B. Verify that overspeed trip device activates below 115% of engine speed.

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## DEFICIENCY ACTION

CORRECT OR REPAIR AS REQUIRED PRIOR TO OPERATION OF VESSEL.

**SYSTEM:** PRESSURE VESSELS **ICR NUMBER:** **O**
**SUBSYSTEM:** EXTERNAL EXAM OF PV **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 115.812, 61.10-5
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Examine each pressure vessel on the ship to verify the following:

1. Pressure gauge installed is accurate, visible, and in good working condition.
2. Verify that the name plate on the vessel is intact and legible. Ensure that the data plate on the relief valve is also intact and the valve is suitable for the application and rated capacity of the receiver and MAWP.
3. Determine that the vessel itself is securely mounted to the ships structure and all piping to receiver is adequately supported.
4. Verify externally that the pressure vessel is in sound condition and that there is no evidence of structural damage.

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## DEFICIENCY ACTION

EFFECT REPAIRS TO CORRECT ANY DEFICIENCY. NOTIFY THE OCMI IF STRUCTURAL DAMAGE IS NOTICED PRIOR TO TAKING CORRECTIVE ACTION.

**SYSTEM:** PRESSURE VESSELS **ICR NUMBER:** **O**
**SUBSYSTEM:** AIR TANKS - INTERNAL EXAM **02**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.10-5
**REGULATORY INSPECTION FREQUENCY:** TWICE IN ANY FIVE-YEAR PERIOD WITH NO MORE THAN 3 YEARS BETWEEN INSPECTIONS

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## INSPECTION CRITERIA

**NOTE:** This ICR applies to each PV that is fitted with a manhole or other inspection opening so it can be satisfactorily examined internally.

A. Examine inside of PV especially all welded connections looking for gauging or pitting.

B. If any defect is noticed with in the PV it must be hydrostatically tested to 1 ½ times the MAWP.

C. If no defect is noted, the PV does not need to be hydrostatically tested.

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## DEFICIENCY ACTION

NOTIFY THE OCMI IF STRUCTURAL DAMAGE IS NOTICED PRIOR TO TAKING CORRECTIVE ACTION.

**SYSTEM:** PRESSURE VESSELS **ICR NUMBER:** **O**
**SUBSYSTEM:** HYRDOSTATIC TESTING **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.10-5
**REGULATORY INSPECTION FREQUENCY:** TWICE IN ANY FIVE-YEAR PERIOD

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## INSPECTION CRITERIA

**NOTE:** Each UPV which can not be internally examined must be hydrostatically tested and each UPV which has been internally examined with noted deficiencies.

A. Hydrostatic test pressure is to be 1 ½ times the MAWP of the UPV.

B. Examine for leaks and seepage.

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## DEFICIENCY ACTION

NOTIFY THE OCMI IF STRUCTURAL DAMAGE IS NOTICED PRIOR TO TAKING CORRECTIVE ACTION.

**SYSTEM:** PRESSURE VESSELS **ICR NUMBER:** **O**
**SUBSYSTEM:** TEST PRESSURE RELIEF VALVES **04**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 61.10-5
**REGULATORY INSPECTION FREQUENCY:** COI INTERVAL

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## INSPECTION CRITERIA

A. Verify the setting of the safety or relief valve is at or below the MAWP of the pressure

B. Function test the hand lifting device.

C. Verify that after testing the valve that it seats tightly.

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## DEFICIENCY ACTION

ANY RELIEF VALVE THAT FAILS SHALL BE REPAIRED OR REPLACED PRIOR TO SYSTEM BEING PLACED IN SERVICE.

| | | | |
|---|---|---|---|
| **SYSTEM:** | PRESSURE VESSELS | **ICR NUMBER:** | **O** |
| **SUBSYSTEM:** | LUBE OIL COOLERS, CONDENSERS , DEAERATORS, AIR EJECTORS, EVAPORATORS | | **05** |

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.10-5
**REGULATORY INSPECTION FREQUENCY:** BIENNIAL

## INSPECTION CRITERIA

A. Clean and examine tube sheets.

B. Demonstrate proper operation.

## DEFICIENCY ACTION

REPLACE DEFECTIVE TUBES. NOTIFY OCMI OF CORRECTIVE ACTIONS.

**SYSTEM:** PRESSURE VESSELS **ICR NUMBER:** **O**
**SUBSYSTEM:** RELIEF VALVES **06**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 54.15-10, 61.10-5
**REGULATORY INSPECTION FREQUENCY:** BIENNIEL

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## INSPECTION CRITERIA

A. Verify nameplate data and MAWP.

B. Apply test pressure not to exceed MAWP and examine for leaks.

C. Test lift setting of valves; not to exceed MAWP and within +/- 10% of valve set pressure for pressures less than 250 psi and within +/- 5% for pressures greater than 250 psi. (Note: Valves may be benched tested).

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## DEFICIENCY ACTION

NOTIFY THE OCMI IF STRUCTURAL DAMAGE IS NOTICED. REPLACE ANY RELIEF VALVE NOT WITHIN SPECS.

**SYSTEM:** AUXILIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** STEERING GEAR **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 58.25, 61.20-1, 113.43
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify all foundations, and all equipment mounting bolts are intact and secured properly.

B. Check piping systems and attachments, equipment securing brackets, protective guards, wire runs and cages, and other items prone to corrosion and vibration fatigue.

C. Inspect control linkages and linkage pins, and ram guides for wear.

D. Verify feedback devices, differential units, or other components that may cause single point failure and make sure they are in good condition.

E. Ensure that all vital connections, pins, couplings and control linkages have securing devices, such as cotter pins or double-nut locking arrangements, to prevent loosening from heavy vibration.

F. Verify emergency steering procedures and steering transfer diagrams are posted, clear and correct.

G. Inspect the carrier bearing for undue wear and leakage of water through the rudder post packing or vent ducts.

H. Inspect the insides of motor controller and switch gear boxes for general condition/ safe wiring practice, loose connections and any signs of corrosion, excessive condensation or electrical arcing.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFECTIVE ITEM. ENSURE IT IS OPERATING PROPERLY PRIOR TO OPERATION

**SYSTEM:** AUXILIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** STEERING GEAR **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 58.25, 61.20-1, 113.43
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

I. Inspect pumps and motors by hand rotating each motor and pump assembly, being alert for unusual noise, binding or a feeling of roughness during rotation. Couplings should be examined for excessive play and evidence of grease slinging. Check motor ventilation openings for cleanliness.

J. Ensure all hydraulic hoses and connections are intact and the oil reservoir is properly filled.

K. Inspect the steering gear space for fire and personnel hazards, i.e. oily rags, dangerous electrical connections, adequate lighting, etc.

L. During operation be alert for unusual noise, vibration, oil leakage, water leakage and abnormal hydraulic pressures. Hunting of the system may indicate feedback problems.

M. Check for overheating of the pumps and motors.

N. Test all systems alarms and indicators. Both visual and audible. (The operation test should be conducted on each pump and on each system follow-up and non-follow- up modes).

O. Operate each motor and pump assembly from the bridge, the alternate control station, and steering gear room through the full range of the rudder travel. The range of rudder movement should be from 35 degrees to 30 degrees in 28 seconds.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY PRIOR TO CARRYING PASSENGERS FOR HIRE

**SYSTEM:** AUXILIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** STEERING GEAR **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 58.25, 61.20-1, 113.43
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

P. Operate each motor and pump assembly on the normal, alternate and emergency power supplies, checking for proper operation of the manual feeder transfer switch and automatic bus transfers.

Q. Control should be switched from bridge control to engine room control and vice versa using posted instructions.

R. Auxiliary steering arrangements should be tested by stimulating a power failure. The system should then be switched and tested. The time limit for the auxiliary system is 60 seconds from 15 degrees to 15 degrees. When power is secure d the loss of power alarm should operate. This should be tested on both controllers.

S. Ensure proper indication is obtained by the helmsman by using the trick wheel (where installed).

T. Ensure proper rudder angle indications is provided at all control stations. Where synchro steering repeaters are used ensure the indications are the same. Visibility from the steering station and night lights shall also be checked. Emergency lighting should be checked as well.

U. Operate steering in all modes and that timing requirements in both normal and emergency modes are met.

V. Ensure rudder angle indicators at all stations are synchronized.

W. Test operation of power failure and overload alarms.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFECTIVE ITEM. ENSURE IT IS OPERATING PROPERLY PRIOR TO OPERATION

**SYSTEM:** AUXILIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** FUEL OIL TANKS, VENTS AND TRANSFER SYSTEMS **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED ENGINEER or his designated representative
**REFERENCES:** 46CFR 119.455, 458, 33CFR 155.750
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. The engineer conducting this inspection should be very knowledgeable in the layout and operation of this system. Ensure accurate and legible diagrams of the fuel oil systems and transfer systems are available. Ensure valves and pumps are accurately and legibly labeled.

B. Piping, including all valves, flanges, pumps and should be visually inspected. Items with cracking, leakage, loose fittings, etc. should be repaired.

C. The high pressure and low pressure strainers should be inspected. These strainers and or baskets should be in good physical condition. The crossover for dual strainers should be operated to ensure they are free to operate. Excessive force or cheater bars shouldn't be necessary to operate the strainers.

D. Ensure strainer and filter bowls are installed and intact.

E. Ensure valves fitted in water traps or filters have plugs installed to prevent leakage.

F. Ensure F.O. Relief valves operate at the appropriate pressure and the discharge is routed to the discharge side of the pump. This should be done on all F.O. pumps including transfer pumps.

G. Ensure excessive leakage is not present at the pump.

H. Ensure spray shields on flanged fittings are correctly installed and in good physical condition.

## DEFICIENCY ACTION

REPLACE OR REPAIR ITEM. NOTIFY OCMI.

**SYSTEM:** AUXILIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** FUEL OIL TANKS, VENTS AND TRANSFER SYSTEMS **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED ENGINEER or his designated representative
**REFERENCES:** 46CFR 119.435, 440, 455
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

I. Inspect the F.O. pumps while it is running and make sure it is operating at correct pressures, without overheating or excessive vibration. The instrumentation for the pumps should be inspected as well, such as pump running indicators, suction, and discharge pressure gauges and flow meters.

J. When equipped, F.O. heaters should be externally examined for instrumentation and leakage. Where steam heaters are used ensure the drains are free from any fuel contamination.

K. Test all remote operated F.O. valves and ensure they operate freely and are actually connected to the appropriate valves.

L. Ensure all tank vents are in good physical condition and are routed to the appropriate vent areas. Adequate containment should be around all F.O. vents. Flame screens should be inspected and installed in all F.O. vents. Flame screens should be of corrosion resistant wire of at least 30x30 mesh, or two screens of at least 20 mesh spaced not less than one-half inch apart nor more than 1-1/2 inches apart.

M. Test all remote shutdowns of F.O. pumps.

## DEFICIENCY ACTION

REPLACE OR REPAIR ITEM. NOTIFY OCMI.

**SYSTEM:** AUXILIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** BILGE **04**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 56.50-50, 61.15-12
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Ensure the bilge system is capable of pumping from and draining any watertight compartment except for ballast, oil and water tanks which have acceptable means for filling and emptying independent of the bilge system.

B. Ensure all standing water drains to bilge suction pipes.

C. Ensure that there are independent valves for each watertight compartment and they are easily accessible and operable and clearly marked for which compartment they control. Ensure the crew understands the reason for these valves and where they are located.

D. If the bilge systems is equipped with strainers adequate means shall be made to ensure the strainers are unobstructed and in good condition.

E. Any remote reach rods controlling the bilge system should be operated and ensured they are actually connected to the appropriate valve.

F. Instrumentation for determining pump suction and pressure should be accurate and in good working order.

G. Examine all non-metallic expansion joints for freedom from paint and condition. Ensure installation dates are recorded.

H. Test all bilge level alarms and make sure they operate properly.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY PRIOR TO OPERATING.

**SYSTEM:** AUXILIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** BALLAST **07**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED ENGINEER or his designated representative
**REFERENCES:** 46CFR 56.50-50, 61.15-12
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Operate ballast pumps and verify proper operation.

B. Check condition of all piping components.

C. Examine all non-metallic expansion joints and verify free from paint. Verify last replacement date is within 10 years.

D. Verify operation of all reach rods or remote valve actuators.

E. Verify operation and accuracy of remote level indicators.

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## DEFICIENCY ACTION

REPLACE OR REPAIR ITEM. NOTIFY OCMI.

**SYSTEM:** AUXILLIARY SYSTEMS **ICR NUMBER:** **P**
**SUBSYSTEM:** PRESSURE PIPING **08**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.15-12, 61.15-15, 61.20-3
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Air Compressors
   1. Examine foundations and mounting hardware.
   2. Examine electrical wiring, pressure switches, and motors. Verify components are in good operating condition. Verify cooling lines are not leaking. Examine all non-metallic expansion joints.
   3. Operate each compressor. Verify pressure switches operate at pressures and differentials recommended by the manufacturer. The cut-off point or unloading pressure must be no greater than the MAWP of the pressure vessel being charged.
   4. Verify switches function properly in all positions.
   5. Test the compressor relief valve in accordance with manufactures instructions. Extreme caution must be taken during this test in event of valve failure, so as not to over pressurize piping.

B. Piping and Receivers
   1. Examine foundations, mounting hardware and pipe hangers.
   2. Verify the valves and piping are free of leaks and visible discoloration.
   3. Verify the installed relief valves are of proper size and location for the applications.
   4. Test the pressure vessel relief valves. The valves may be removed and bench tested if desired. Set points for each valve may not exceed MAWP of the pressure vessel being protected. Under continued operation of the compressor after the relief valve has lifted, the pressure in the pressure vessel may not rise in excess of 10% before full opening of the valve is reached, and the pressure rise stops.
   5. Test all relief valves serving system reducing stations, and non-inspected vessels (less than 5 $ft^3$).

C. Additional tests of pressure alarms and compressor operation indicators may be required in accordance with automation checklists.

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## DEFICIENCY ACTION

CORRECT OR REPAIR AS REQUIRED PRIOR TO OPERATION OF SYSTEM.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** GENERATOR - GENERATOR ELECTRIC SET **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 110.30-5, Part 111
**REGULATORY INSPECTION FREQUENCY:** BIENNALLY

## INSPECTION CRITERIA

A. EACH INDIVIDUAL GENERATOR

1. Ensure the location of the generator is receiving adequate ventilation and is as dry as possible.
2. Verify the operation of the voltmeter and ammeter for each generator rated at 50 volts or more.
3. Verify the operation of the frequency measuring device for each AC generator.
4. Verify a nameplate containing the information required by Article 445 or Article 430 of the NEC is attached.
5. Verify each generator is protected by an overcurrent device with a set value not exceeding 115% of full load rating.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** GENERATOR - GENERATOR ELECTRIC SET **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 110.30-5, Part 111
**REGULATORY INSPECTION FREQUENCY:** BIENNALLY

B. MULTIPLE GENERATOR INSTALLATIONS

1. For non-parallel systems; verify the operation of the interlock which prevents simultaneous connection to the switchboard.
2. For parallel systems;
   a. test the operation of the reverse-power or reverse-current trips,
   b. verify the operation of the switchboard speed control for each prime mover,
   c. verify the operation of the wattmeter for each generator, and
   d. verify the operation of the synchroscope and synchronizing lamp that has a selector switch to show synchronization for paralleling generators.

C. DUAL VOTAGE GENERATORS

1. Verify the neutral of the voltage system is solidly connected to the switchboard's neutral bus.
2. Verify the neutral bus is connected to ground.
3. Verify ground detection;
   a. For AC systems verify the ammeter indicates the current in the ground connection and has a scale that accurately measures in the 0 to 10 ampere range, and verify the ammeter switch is of the spring return-to-on type.
   b. For DC systems verify that the zero center ammeter is in the ground connection, has a scale range of 150% of the neutral current rating and has the polarity of the ground marked.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** GENERATOR - GENERATOR ELECTRIC SET **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 110.30-5, Part 111
**REGULATORY INSPECTION FREQUENCY:** BIENNALLY

D. SWITCHBOARDS

1. General overview of the physical condition should be given to the entire switchboard.
2. Ensure there is a non-conductive mat or non-conducting grating in each working area in front of and behind each board.
3. Non-conducting handrails and guard rails shall be present on the board face.
4. Dripshields shall be present and in good physical condition.
5. All ground detection lights shall be in working order and no grounds should be indicated.
6. All instrumentation (meters) shall be in good working order and recently calibrated. All controls and meters should be clearly and accurately identified.
7. Where the generators can be paralleled all synchronizing controls and associated equipment for synchronizing generators should be functioning properly
8. Overcurrent devices should be clearly and accurately identified.
9. All openings where equipment has been removed are covered with blanks.
10. Test operation of all bus transfer switches.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** GENERATOR - PRIMER MOVER- DIESEL **02a**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 61.15-12, 110.30, 111.12-1
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Operate overspeed trip. Trip shall operate at or below 115 percent of rated RPM.

B. Operate low lube oil trip in accordance with manufactures instructions.

C. Verify operation at generator no-load, half load and full load conditions, ensure engine RPMs stay within recommended ranges.

D. Examine:

1. Foundation bolts.
2. Fuel, lube oil and cooling water lines for defects.
3. Engine electrical system for defects.
4. Non-metallic expansion joints for paint and condition.

E. Verify operation of start and stop functions from local engine room and pilothouse control stations.

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## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** GENERATOR - PRIMER MOVER- STEAM TURBINE **02b**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 56.50-80, 61.20-3, 111.10-3, 111.12
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Operate overspeed trip. Trip shall operate at or below 115 percent of rated RPM.

B. Operate low lube oil trip in accordance with manufactures instructions.

C. Verify operation at generator no-load, half load and full load conditions, ensure RPMs stay within recommended ranges.

D. Examine:

1. Foundation bolts.
2. Lube oil lines for defects.
3. Expansion joints for condition.

E. Verify operation of governors.

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## DEFICIENCY ACTION

CORRECT, REPAIR OR ADJUST ANY COMPONENT AS REQUIRED

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** EMERGENCY GENERATORS AND SWITCHBOARDS **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 110.30-5, 111.15, 111.30-25, Part 112
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Prime Mover

1. Operate Prime Mover Overspeed Trips, Low Lube Oil Alarms and Trips, and High Temperature Alarms.
2. Verify operation of autostart and start, stop controls at all control stations.
3. Examine fuel, lube oil, and cooling water lines for condition.
4. Examine engine electrical system for defects.
5. Verify operation of fixed fire system shutdowns.

B. Each individual generator

1. Ensure the location of the generator is receiving adequate ventilation and is as dry as possible.
2. Verify the operation of the voltmeter and ammeter for each generator rated at 50 volts or more.
3. Verify the operation of the frequency measuring device for each AC generator.
4. Verify a nameplate containing the information required by Article 445 or Article 430 of the NEC is attached.
5. Verify each generator is protected by an overcurrent device with a set value not exceeding 115% of full load rating.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** EMERGENCY GENERATORS AND SWITCHBOARDS **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 110.30-15, 111.15, 111.30-25, Part 112
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

C. MULTIPLE GENERATOR INSTALLATIONS

1. For non-parallel systems; verify the operation of the interlock which prevents simultaneous connection to the switchboard.
2. For parallel systems;
   a. test the operation of the reverse-power or reverse-current trips,
   b. verify the operation of the switchboard speed control for each prime mover,
   c. verify the operation of the wattmeter for each generator, and
   d. verify the operation of the synchroscope and synchronizing lamp that has a selector switch to show synchronization for paralleling generators.

D. DUAL VOTAGE GENERATORS

1. Verify the neutral of the voltage system is solidly connected to the switchboard's neutral bus.
2. Verify the neutral bus is connected to ground.
3. Verify ground detection;
   a. For AC systems verify the ammeter indicates the current in the ground connection and has a scale that accurately measures in the 0 to 10 ampere range, and verify the ammeter switch is of the spring return-to-on type.
   b. For DC systems verify that the zero center ammeter is in the ground connection, has a scale range of 150% of the neutral current rating and has the polarity of the ground marked.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** EMERGENCY GENERATORS AND SWITCHBOARDS **03**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 110.30-15, 111.15, 111.30-25, Part 112
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

E. LOAD TEST GENERATORS WITH STEERING GEAR, FIRE PUMP, BILGE PUMPS, AND REQUIRED AUTOMATION CIRCUITS (IF EQUIPPED), FED FROM EMERGENCY SWITCHBOARD.

F. SWITCHBOARDS

1. A general overview of the physical condition should be given to the entire switchboard.
2. Ensure there is a non-conductive mat or non-conducting grating in each working area in front of and behind each board.
3. Non-conducting handrails and guard rails shall be present on the board face.
4. Dripshields shall be present and in good physical condition.
5. All ground detection lights shall be in working order and no grounds should be indicated.
6. All instrumentation (meters) shall be in good working order and recently calibrated. All controls and meters should be clearly and accurately identified.
7. Where the generators can be paralleled all synchronizing controls and associated equipment for synchronizing generators should be functioning properly
8. Overcurrent devices should be clearly and accurately identified.
9. All openings where equipment has been removed are covered with blanks.
10. Test operation of all bus transfer switches.

## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** EMERGENCY BATTERIES **04**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 111.55-01, 112.55-15
**REGULATORY INSPECTION FREQUENCY:** BIENNIALLY

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## INSPECTION CRITERIA

A. Verify connections to battery terminals are of the permanent type.

B. Examine battery trays to ensure serviceability. Verify lining or construction is of a material that is resistant to damage by electrolyte.

C. Test the ammeter connected in the charging circuit.

1. For a LARGE battery installation consisting of a charger having an output of more than 2kw:
    a. Verify the locker, room or enclosed box used for the batteries is dedicated.
    b. Verify the electric motors for the battery installation power ventilation system are Class I, Division 1, Group B or are at least 10’ form the exhaust end of duct.
    c. Test the interlock between the battery charger and the ventilation system to ensure the batteries can not be charged without ventilation.
2. For a SMALL battery installation consisting of a charger having an output of 2kw or less:
    a. Verify ventilation is sufficient to dissipate the gases generated during charging.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** LIGHTING SYSTEMS **06**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 111.75
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Ensure each lighting fixture globe, lens or diffuser has a guard or is made of high strength material except in a location where it is not subject to damage.

B. Ensure each lighting fixture is not being used as a connection box for a circuit other that the branch circuit supplying the fixture.

C. Ensure each table lamp, desk lamp, floor lamp, or similar equipment is secured in place.

D. Ensure the portable battery operated lights located at the operating station and the access to the propulsion machinery space are operational.

E. Test the emergency lighting fitted along the line of escape to the main deck from all passenger and crew accommodation spaces located below the main deck. Ensure it is adequate.

F. Test the automatic activation of the emergency lighting system upon loss of the main lighting system.

G. Test lighting in way of liferaft embarkation stations to ensure proper illumination of the area and freedom of movement.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** RECEPTACLES, OUTLETS, FIXTURES AND ACCESORIES **07**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED ENGINEER or his designated representative
**REFERENCES:** 46CFR 91.25-10, 110.30, 111.01, 111.75, 111.76, 111.79, 111.81, 111.83
**REGULATORY INSPECTION FREQUENCY:** BIENNIAL

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## INSPECTION CRITERIA

A. Ensure each receptacle outlet that operates at 100 volts or more has a grounding pole and that the poles are adequately grounded.

B. Examine cable and wires for signs of mechanical damage, jury rigs, dead end cables, splices, etc.

C. Examine cable and wire supports for corrosion or deterioration. Supports should not be spaced more than 24” apart and should not cause chafing or other damage to the cable or wire.

D. Ensure portable cables and wires are used in appropriate situations and are not used for a “temporary fix”.

E. Ensure watertight covers are installed in wet locations

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** DISTRIBUTION PANEL BOARDS AND CONTROLLERS **08**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 111.05-21, 111.12, 111.30, 111.40, 111.54, 111.70
**REGULATORY INSPECTION FREQUENCY:** BIENNIAL

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## INSPECTION CRITERIA

A. DISTRIBUTION PANELS

1. Ensure each distribution panel is adequately ventilated and protected form falling debris and dripping or splashing water.
2. Verify each panel board has circuit directory containing circuit designation, load of each circuit, rating of each breaker.

B. CONTROLLERS

1. Verify each controller is watertight or weathertight depending on location.
2. Verify interlock equipment functions properly cutting power when controller is opened.
3. Verify each controller contains a circuit diagram.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM.

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** COMPONENTS IN HAZARDOUS LOCATIONS **12**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 111.105
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Examine electrical equipment in spaces containing machinery powered by, or fuel tanks for, gasoline or other fuels having a flashpoint of 110F or lower. Ensure electrical equipment is explosion-proof or ignition-protected, or part of an intrinsically safe system.

B. Examine lockers used to store paint, oil, turpentine, or other flammable liquids. Ensure electrical equipment is explosion-proof or ignition-protected, or part of an intrinsically safe system.

C. Examine cargo spaces of RO/RO vessels. Ensure electrical installations meet ABS Rule 4/5.160

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** ELECTRICAL **ICR NUMBER:** **Q**
**SUBSYSTEM:** EMERGENCY POWER AND LIGHTING **13**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46CFR 112.15
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify each system listed in 46 CFR 112.15-5 is powered when vessel is operating only with emergency power system.

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## DEFICIENCY ACTION

REPLACE OR REPAIR DEFICIENT ITEM. ENSURE IT IS OPERATING PROPERLY

**SYSTEM:** MACHINERY SPACE SAFETY **ICR NUMBER:** **R**
**SUBSYSTEM:** ESCAPE ROUTES **01**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25-10, 92.10
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify that all escape hatches are clear of interferences; all hatches, doors and scuttles operate freely and none are locked. Lighting in area is sufficient and intact.

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION ON DEFICENT ITEMS.

**SYSTEM:** MACHINERY SPACE SAFETY **ICR NUMBER:** **R**
**SUBSYSTEM:** WATERTIGHT INTEGRITY **02**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25-10, 91.25-25, 92.01-13
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify the following:

1. All watertight doors and closures operate properly and with a tight seal.
2. All watertight door and closure alarms and indicators work properly.
3. General watertight integrity of all machinery spaces.

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## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION ON DEFICENT ITEMS.

**SYSTEM:** MACHINERY SPACE SAFETY **ICR NUMBER:** **R**
**SUBSYSTEM:** MACHINERY GUARDS **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 92.25-15
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify that all protective guards, covers, screens and rails are in place for all exposed and dangerous engine room machinery.

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## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION ON DEFICENT ITEMS.

**SYSTEM:** MACHINERY SPACE SAFETY **ICR NUMBER:** **R**
**SUBSYSTEM:** GENERAL SAFETY **04**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 46 CFR 91.25-10, 92.05-10
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify the presence and legibility of required markings, placards and notices.

B. Examine tank tops, bilges, cofferdams and bilge wells for leaks, deterioration, and fire and safety hazards.

C. Examine sea suctions and overboard discharges for leaks and deterioration.

1. Verify that all valves operate properly, including reach rods and power operated valves.

D. Examine machinery spaces for fire and safety hazards, missing protective guards, electrical equipment properly installed and complete, fluid leaks and erratic equipment operation.

## DEFICIENCY ACTION

TAKE CORRECTIVE ACTION ON DEFICENT ITEMS.

**SYSTEM:** POLLUTION **ICR NUMBER:** **S**
**SUBSYSTEM:** MARINE SANITATION DEVICE **01**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 159
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. General Operation

1. Examine components and verify proper operation.
2. Verify instruction manuals are on board and available.
3. Verify required disinfectant chemicals and other consumables are stocked on board vessel.
4. Verify capacity is adequate for the number of persons being served.
5. Verify there no leaks.
6. Verify any direct overboards are blank flanged, or capable of being padlocked shut to prevent the discharge of untreated effluent.

B. Electrical/Piping

1. Verify the electrical components are in good condition and free of damage, defect, water contamination.
2. Verify piping is serviceable, free of leakage and excessive corrosion and has not been improperly modified.
3. Verify vents do not discharge into other vessel spaces or tanks.

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## DEFICIENCY ACTION

EFFECT REPAIRS TO CORRECT ANY DEFICIENCY. NOTIFY THE OCMI IF UNABLE TO MAKE REPAIRS PRIOR TO OPERATION.

**SYSTEM:** POLLUTION **ICR NUMBER:** **S**
**SUBSYSTEM:** PLACARDS **02**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 151.59, 155.450
**REGULATORY INSPECTION FREQUENCY:** BIENNIAL

## INSPECTION CRITERIA

A. Pollution Placard - Oil

1. Verify a placard of durable material of at least 5 by 8 inches, is posted in a conspicuous place in each machinery space or at the bilge and ballast pump control station that contains the “Discharge of Oil Prohibited” statement of 33 CFR 155.450

B. Garbage Placard

1. Verify one or more placards made of a durable material of at least 4 by 9 inches and lettered in letters 1/8 inch high, are posted in prominent locations and sufficient numbers to be read by crew and passengers. The locations must be easily accessible to the intended reader and may include embarkation points, food service facilities, garbage handling spaces and common spaces on deck. Placards must contain the required sections of 33 CFR 151.59.

## DEFICIENCY ACTION

REPLACE MISSING OR ILLEGIBLE PLACARDS.

**SYSTEM:** POLLUTION **ICR NUMBER:** **S**
**SUBSYSTEM:** OIL CONTAINMENT **03**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 155.320
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify each fixed container or enclosed deck area under or around each fuel oil or bulk lube oil tank vent, overflow or fill pipe is intact.

B. Verify each portable container is intact and has a capacity of at least 5 U.S. Gallons.

C. Verify all welds are intact, container walls are free of perforations, and the container is clean and dry.

D. Verify all mechanical means of closing each drain for containment is accessible and works properly.

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## DEFICIENCY ACTION

EFFECT REPAIRS TO CORRECT ANY DEFICIENCY.

**SYSTEM:** POLLUTION **ICR NUMBER:** **S**
**SUBSYSTEM:** OIL TRANSFER PROCEDURES **04**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 155.720, 155.730, 155.740, 155,750, 155.785, 155.790, 155.800
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify that the vessel has an accurate up to date "OIL TRANSFER PROCEDURE", covering the criteria detailed in 33 CFR 155.750, permanently posted or in a location available to members of the crew when engaged in transfer operations, to or from the vessel or from tank to tank within the vessel. Personnel are required to use the procedures at each transfer operation.

B. Ensure a "PERSON IN CHARGE" is designated in writing.

C. Verify adequate deck lighting in proper repair is provided at each transfer point work area.

D. Ensure all hoses on board the vessel that are used for transfers comply with the requirements of 33 CFR 154.500.

## DEFICIENCY ACTION

EFFECT REPAIRS TO CORRECT ANY DEFICIENCY. NOTIFY THE OCMI IF UNABLE TO MAKE REPAIRS PRIOR TO OPERATION.

**SYSTEM:** POLLUTION **ICR NUMBER:** **S**
**SUBSYSTEM:** OILY WATER SEPERATOR **05**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 155, 46 CFR 91.25-38, 162.050
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Inspect and verify correct operation of the following:
   1. Oily Water Separator and bilge alarm per manufactures instructions.
   2. Oily waste disposal systems:
      a. Auxiliary boiler fuel preparation system.
      b. Diesel machinery sumps.
   3. Shore discharge system.
      a. Piping and valves.
      b. Sludge pumps.
      c. Remote shutdowns.

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## DEFICIENCY ACTION

EFFECT REPAIRS TO CORRECT ANY DEFICIENCY. NOTIFY THE OCMI IF UNABLE TO MAKE REPAIRS PRIOR TO OPERATION.

**SYSTEM:** POLLUTION **ICR NUMBER:** **S**
**SUBSYSTEM:** GARBAGE **06**

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## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 151
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

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## INSPECTION CRITERIA

A. Verify vessel's waste management plan.

B. Verify records kept for discharges to facilities.

C. Verify records kept for discharges at sea

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## DEFICIENCY ACTION

EFFECT CORRECTIONS TO ANY DEFICIENCY.

**SYSTEM:** POLLUTION **ICR NUMBER:** **S**
**SUBSYSTEM:** OIL RECORD BOOK **07**

## AUTHORIZATION

**AUTHORIZED INSPECTOR:** LICENSED OFFICER or his designated representative
**REFERENCES:** 33 CFR 151
**REGULATORY INSPECTION FREQUENCY:** ANNUALLY

## INSPECTION CRITERIA

A. Verify oil record aboard if vessel is greater than 400 gross tons.

B. Verify entries made for all required discharges, transfers, and operations noted in 33 CFR 151.25.

## DEFICIENCY ACTION

EFFECT CORRECTIONS TO ANY DEFICIENCY.