Tall Ships America

Adventure and Education Under Sail®

Recommended Protocol for Rig Inspection and Template for Rig Inspection Checklist

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Recommended Protocol for Rig Inspection and Template for Rig Inspection Checklist

I. Introduction

This product is designed to assist vessel operators to conduct and document routine monthly inspections of the rigging and related hull structures aboard their vessels. This Rig Inspection Checklist is provided as a *template*, and should be adapted by operators as needed to fit the precise needs and complexity of their own vessel's rig. Upon completion of the monthly inspection, the Rig Inspection Checklist should be reviewed and signed by the master, and then maintained on board. In addition to conducting and documenting regular monthly rig inspections, the operator should keep a Rigging Maintenance Logbook documenting all rigging repairs, replacements, renewals etc. Compiled Rig Inspection Checklist records and Rigging Maintenance Logbook entries shall be made available to USCG Marine Inspectors as may be requested during COI inspections.

II. Methodology

The Checklist is organized by mast, with an additional section for the headrig. A single individual should complete the entire inspection for any given section, and this same person should enter and initial each inspection category or item upon completion. Each category shall be assessed a condition based on a number thus: 1= good, 2 = fair, 3 = poor. Where fair or poor conditions exist, the master shall be notified, and a plan to correct observed deficiencies shall be made. Monthly inspections shall be as thorough as possible, without requiring the removal of protective coatings or other invasive inspection practices (i.e. service removal). In cases where evidence suggests a more in-depth investigation is required (bleeding rust, oversized holes in tangs, significant chafe, etc.), a notation shall be made on the checklist, the master shall be informed and a detailed description, including corrective action taken or planned, shall be entered in the Rigging Maintenance Logbook.

III. Rig Maintenance Logbook

Entries in the rig maintenance logbook shall include any deficiencies found during the monthly inspections and the corrective actions taken or planned. Periodic routine and preventative maintenance activities, and equipment or component repair or replacement shall be logged as well.

IV. Technical Reference

In addition to the use of organizational operations and maintenance manuals, Tall Ships America has compiled a technical reference bibliography as part of this Rigging Protocol. Collectively, these references cover subjects related to the construction, design, installation, inspection and maintenance of traditional and modern sailing rigs.

TECHNICAL BIBLIOGRAPHY AND REFERENCE LIST

THIS LIST WAS DEVELOPED AS REFERENCE GUIDE FOR THOSE CHARGED WITH INSPECTION AND MAINTENANCE OF SAILING RIGS IN TRADITIONAL SAILING VESSELS. IT IS NOT EXHAUSTIVE, NOR WILL ALL TEXTS APPLY TO ALL VESSELS, BUT IT DOES REPRESENT DEFINITIVE WORKS PERTAINING TO RIGGING IN PERIOD SAILING VESSELS. THE INTENT IS NOT TO PRODUCE A LIST OF WORKS THAT MUST BE KEPT ABOARD, RATHER TO PROVIDE A LIST OF RESOURCES FOR MASTERS, MATES, BOATSWAINS AND OTHERS WORKING IN THE RIG.

- *Ashley's Book of Knots,* Clifford W. Ashley
- *Auxiliary Sail Vessel Operations for the Aspiring Professional Sailor,* G. Andy Chase
- *Eagle Seamanship-Square Rigger Sailing*, USCG Academy
- *Hand Reef and Steer*, Tom Cuncliffe
- *Knight's Modern Seamanship*
- *Masting and Rigging the Clipper Ship and Ocean Carrier*, Harold Underhill
- *Naval Ships' Manual Chapter 613-Wire and Fiber Rope and Rigging* (Naval Sea Systems Command)
- *The Art of Rigging*, George Biddlecombe
- *The Complete Rigger's Apprentice*, Brian Toss
- *The Gaff Rig Handbook*, John Leather
- *The Kedge Anchor*, Wm. Brady, USN
- *The Sailmaker's Apprentice*, Emiliano Marino
- *The Young Sea Officer's Sheet Anchor*, Darcy Lever
- *Steel's Elements of Mastmaking, Sailmaking, and Rigging*, David Steel, Gill, Claude S.
- *Splicing Wire & Fiber Rope* (by Raoul Graumont &John Hensel, Cornell Maritime Press)
- *Understanding Rigs and Rigging,* Richard Henderson

Template for Rig Inspection Checklist

Vessel Name _____

Official Number _____

Date of Inspection _____

Crew Member _____ (signature)
Conducting the Inspection

Master _____ (signature)

Area - Main Mast

A. Safety/Crew Support Aloft - - - - **Init/Date:_____**
- 1 2 3 Ratlines, ratboards, etc. and method of attachment
- 1 2 3 Backropes, footropes, cranelines, gantlines, jack-lines, etc.

B. Mast (including uppers) - - - - **Init/Date:_____**
- 1 2 3 Examine mast column
- 1 2 3 Examine step, partners, wedges, compression post, etc.
- 1 2 3 Examine crosstrees, spreaders, trestletrees, hounds, etc.
- 1 2 3 Examine tangs, mast bands, strops
- 1 2 3 Evaluate condition of protective and lubrication coatings
- 1 2 3 Antennas, instrument sensors, lights, wiring, etc.
- 1 2 3 Evaluate mast for rust, rot, cracks, excessive checking, corrosion, etc.

C. Standing Rigging - - - - - **Init/Date:_____**
- 1 2 3 Shrouds and Stays (Wire/Hemp/Other) - Examine condition of shroud or stay for broken strands, deformation, chafe, rust, discoloration
- 1 2 3 Wire termination - splices, swages, poured sockets, seizings, etc.
- 1 2 3 Fittings and terminals - Examine for cracks, rust, corrosion, deformation, wear
- 1 2 3 Turnbuckles, bottlescrews, deadeyes and lanyards - Examine condition and integrity
- 1 2 3 Chain plates - Evaluate condition and attachment
- 1 2 3 Coatings and coverings (service, etc) - Examine condition
- 1 2 3 Rigging tension - Ensure proper tension

D. Running Rigging - - - - **Init/Date:_____**
- a. Evaluate condition of Halyards, Sheets, Braces, etc.
  Notes:_____
- b. Evaluate conditions of Blocks
- 1 2 3 Keeper plates present
- 1 2 3 Sheaves turning freely
- 1 2 3 Rope/Metal strops in good condition
- 1 2 3 Shackles seized/moused
- 1 2 3 Becket bolts secure
- 1 2 3 Splices, soft eyes, etc.

E. Sails - - - - - - - **Init/Date:_____**

1 2 3 Evaluate condition of cloth, stitching, patches, reinforcements
1 2 3 Cringles, Earrings, etc
1 2 3 Bolt ropes
1 2 3 Lashings, Shackles, attachments
1 2 3 Reefing gear (points, nettles, outhauls, etc.)

F. Spars - - - - - - - **Init/Date:_____**

1 2 3 Hardware - ironwork, parrels, bails, goosenecks, fittings
1 2 3 Evaluate spars for rust, rot, cracks, excessive checking, corrosion, deformation, etc.
1 2 3 Coatings
1 2 3 Penetration points

G. Deck Hardware - - - - - **Init/Date:_____**

Winches/Crank-alls, etc

1 2 3 Attachment point
1 2 3 Functioning properly
1 2 3 Dogs and stops

1 2 3 Tracks, travelers, pad eyes, turning blocks
1 2 3 Pin rails, fife rails
1 2 3 Cleats, bits, bollards, kevels, belaying pins

Area-Fore Mast

A. Safety/Crew Support Aloft - - - - **Init/Date:_____**

1 2 3 Ratlines, ratboards, etc. and method of attachment
1 2 3 Backropes, footropes, cranelines, gantlines, jack-lines, etc.

B. Mast (including uppers) - - - - **Init/Date:_____**

1 2 3 Examine mast column
1 2 3 Examine step, partners, wedges, compression post, etc.
1 2 3 Examine crosstrees, spreaders, trestletrees, hounds, etc.
1 2 3 Examine tangs, mast bands, strops
1 2 3 Evaluate condition of protective and lubrication coatings
1 2 3 Antennas, instrument sensors, lights, wiring, etc.
1 2 3 Evaluate mast for rust, rot, cracks, excessive checking, corrosion, etc.

C. Standing Rigging - - - - - **Init/Date:_____**

1 2 3 Shrouds and Stays (Wire/Hemp/Chain/Other) - Examine condition of shroud or stay for broken strands, deformation, chafe, rust, discoloration
1 2 3 Wire termination - splices, swages, poured sockets, seizings, etc.
1 2 3 Fittings and terminals - Examine for cracks, rust, corrosion, deformation, wear
1 2 3 Turnbuckles, bottlescrews, deadeyes and lanyards - Examine condition and integrity
1 2 3 Chain plates - Evaluate condition and attachment
1 2 3 Coatings and coverings (service, etc) - Examine condition
1 2 3 Rigging tension - Ensure proper tension

D. Running Rigging - - - - **Init/Date:_____**

a. Evaluate condition of Halyards, Sheets, Braces, etc.
Notes:_____

b. Evaluate conditions of Blocks

1 2 3 Keeper plates present
1 2 3 Sheaves turning freely
1 2 3 Rope/Metal strops in good condition
1 2 3 Shackles seized/moused
1 2 3 Becket bolts secure
1 2 3 Splices, soft eyes, etc.

E. Sails - - - - - - - **Init/Date:_____**

1 2 3 Evaluate condition of cloth, stitching, patches, reinforcements
1 2 3 Cringles, Earrings, etc
1 2 3 Bolt ropes
1 2 3 Lashings, Shackles, attachments
1 2 3 Reefing gear (points, nettles, outhauls, etc.)

F. Spars - - - - - - - **Init/Date:_____**

1 2 3 Hardware - ironwork, parrels, bails, goosenecks, fittings
1 2 3 Evaluate spars for rust, rot, cracks, excessive checking, corrosion, deformation, etc.
1 2 3 Coatings
1 2 3 Penetration points

G. Deck Hardware - - - - - **Init/Date:_____**

Winches/Crank-alls, etc

1 2 3 Attachment point
1 2 3 Functioning properly
1 2 3 Dogs and stops

1 2 3 Tracks, travelers, pad eyes, turning blocks
1 2 3 Pin rails, fife rails
1 2 3 Cleats, bits, bollards, kevels, belaying pins

Area-Headrig

A. Safety/Crew Support - - - - - **Init/Date:_____**

1 2 3 Footropes
1 2 3 Netting
1 2 3 Lifelines, jack-ropes, etc.

B. Bowsprit (including jib-boom) - - - - **Init/Date:_____**

1 2 3 Examine bowsprit and jib-boom
1 2 3 Examine heel, kingpost, partners, etc
1 2 3 Examine ironwork and hardware: cranse iron, spreaders, martingale, etc.
1 2 3 Evaluate condition of protective and lubrication coatings

C. Standing Rigging - - - - - **Init/Date:_____**

1 2 3 Shrouds and Stays (Wire/Hemp/Chain/Other) - Examine condition of shroud or stay for broken strands, deformation, chafe, rust, discoloration
1 2 3 Wire termination - splices, swages, poured sockets, seizings, etc.
1 2 3 Fittings and terminals - Examine for cracks, rust, corrosion, deformation, wear
1 2 3 Turnbuckles, bottlescrews, deadeyes and lanyards - Examine condition and integrity
1 2 3 Chain plates, stem fittings - Evaluate condition and attachment
1 2 3 Coatings and coverings (service, etc) - Examine condition
1 2 3 Rigging tension - Ensure proper tension

D. Running Rigging - - - - - **Init/Date:_____**

a. Evaluate condition of Halyards, Sheets, Braces, etc.
Notes:_____

b. Evaluate conditions of Blocks

1 2 3 Keeper plates present
1 2 3 Sheaves turning freely
1 2 3 Rope/Metal strops in good condition
1 2 3 Shackles seized/moused
1 2 3 Becket bolts secure
1 2 3 Splices, soft eyes, etc.

E. Sails - - - - - - - **Init/Date:_____**

1 2 3 Evaluate condition of cloth, stitching, patches, reinforcements
1 2 3 Cringles, Earrings, etc
1 2 3 Bolt ropes
1 2 3 Lashings, Shackles, attachments
1 2 3 Reefing gear (points, nettles, outhauls, etc.)

F. Spars - - - - - - - **Init/Date:_____**

1 2 3 Hardware- ironwork, parrels, bails, goosenecks, fittings
1 2 3 Evaluate spar for rust, rot, corrosion, deformation
1 2 3 Coatings
1 2 3 Penetration points

G. Deck Hardware - - - - - **Init/Date:_____**

Winches/Crank-alls, etc

1 2 3 Attachment point
1 2 3 Functioning properly
1 2 3 Dogs and stops

1 2 3 Tracks, travelers, pad eyes, turning blocks
1 2 3 Pin rails, fife rails
1 2 3 Cleats, bits, bollards, kevels, belaying pins