



Louisiana Universities Marine Consortium
Oceanographic Research Vessel Pelican Shipyard Specification

Prepared by:

JM/EE

Approved by:

Revision No.:

RO

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12/08/2022

Page

SHIP REPAIR SPECIFICATION

VESSEL NAME: R / V PELICAN
OWNER: LUMCON
CLASSIFICATION SOCIETY; AMERICAN BUREAU OF SHIPPING (ABS)
HOMEPORT: CHAUVIN, LA
LAROSE (1985)
GROSS TONS: 291

LUMCON invites you to provide detailed budgetary quotation as outlined in the following specification.

Louisiana Universities
Marine Consortium
8124 Highway 56, Chauvin,
LA 70344



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1 Pelican Principal Characteristics

The R/V PELICAN is an Ocean Going Research Vessel homeported in Chauvin, LA and classed by American Bureau of Shipping (ABS) as specified below. She has the following principal characteristics:

LOA	116'-4"
Beam	26'-6"
Depth	12'-6"
Draft	9'-0"
US/Intl Tonnage	291 GRT/400 GTI
Cargo Capacity	N/A
Class	✕ABS, Loadline with ABS Stability Letter, Non-SOLAS
Flag	USCG Sub U, Uninspected Vessel for Vessel Less Than 300 GRT.

The following General Conditions and Specifications outline repair, maintenance, and survey work to be performed by the Shipyard to facilitate safe and reliable re-entry into continuous service.

2 General Conditions

In these Conditions for the Shipyard Tender, 'Material(s)' means all machinery, equipment, piping, fittings, all mechanical / electrical / pneumatic / hydraulic items, including steelwork, to be supplied by the Shipyard or Shipyard Contractor or the Owners according to the Owners' Specification(s). Materials to be supplied and works and services to be followed according to the Owners' Specification(s) as outlined in this document.

Where Specifications(s) call for 'overhaul' of machinery, the Shipyard shall allow for dismantling of parts, opening-up, cleaning (where required), examination(s), renewal of parts with Owners' supplied spares, reassembling with new components.

General and Special Conditions of Tender

The Material and Works will be supplied in accordance with the Standard Ship Repair Contract REPAIRCON issued by BIMCO.

In addition to the conditions of the Standard Ship Repair Contract, the following specific conditions mentioned below will apply where applicable.

These items are to be incorporated into the Standard Ship Repair Contract as specific terms and conditions as an appendix.

Any requests for exceptions to the Conditions of the Tender have to be listed by the Shipyard in the quotation. Other exceptions than those listed in the quotation will not be accepted by the Owners.

In case of conflict between the approved quotation, the conditions to the tender and the BIMCO Ship Repair Contract, the following ranking order will apply:

1. Approved quotation
2. Conditions for Tender
3. BIMCO Ship Repair Contract
4. Owners' Specification(s)

Drawings and technical documentation that are submitted by the Owners will remain their sole property.

The Specification(s), drawings and or instructions of the Owners are given to the Shipyard as a general guidance only. The Shipyard shall be responsible for its own work specifications, materials including taking dimensions and measurements prior to the start of work according to which the works will be executed as outlined in the project schedule.

The Shipyard is to inform the Office of State Procurement and the Owners in writing of any shortcomings, failings or other imperfections in the Specification(s) or the Owners' instructions, which the Shipyard, as an experienced and qualified ship repairer, may reasonably have accessed or established.

Submission of a tender is entirely at the discretion of the party submitting the tender. The Owners will not contribute towards the expenses of compiling any bid and not be responsible for any costs or losses incurred by any bidder.

The Owners are not bound to accept the lowest or any tender or to enter correspondence or discussion relating to the rejection of any or all the tenders.

Nevertheless, the Owners shall have the right to request any or all bidders to explain or reconsider their bids without the Owners incurring any obligation whatsoever.

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3 Scope of Work

11.000 Shipyard General Services

Shipyard shall include in its quotation firm rate schedule for the services outlined below. Rates shall be structured as specified below where applicable.



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00-01-01 – Dry-docking (firm fixed rate)

Shipyard shall provide firm fixed price for dry-docking including:

- i) Tug service as required
- ii) Line handlers
- iii) Blocking (materials and labor) per the supplied docking plan
- iv) All other necessary services, inspections, materials per shipyard standard practice

00-03-01 – Shipyard Services & Utilities

Shipyard shall provide rates for the following services. Rates shall be structured as daily rate:

- i) Shorepower (100A 480/3)
- ii) Potable Water
- iii) Trash Removal/Dumpster

00-03-03 – Competent Person & Marine Chemist

Shipyard shall provide competent person & marine chemist to certify tanks, engine room and voids for entry as needed by work performed and for ABS surveyor.

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00-06-01 – Bilge Cleaning & Oily Water Disposal, and Bottom plate Renewal

- a) Mechanically clean engine room bilges for rust. Disposal of any oily water. (vessel will arrive with bilges previously pumped out)

Prime and paint

1. Engine Room bilges are defined as area between frames 27- 40, the width of the vessel (26.6 ft.) and from the ships bottom plating to the engine room deck plates.

- b) Prime with one coat Dimetcote 302H Zinc (5 WFT Mils.) on bare metal.

- c) Paint two coats of Amercoat 385 Epoxy (8 WFT Mils.)

Provide equipment to clean and gas-free engine room- Provide GAS-FREE certification to Owner.

00-06-02 -Bottom Replacement

Furnish labor, material and equipment to replace a piece of corroded steel measuring approximately 24"X 60" between frames 27-28 on the outboard edge on the Port side of the vessel. This area butts up against a potable water tank.

- 1) Cut out corroded steel bottom plate
- 2) Weld new .375 (3/8) steel plating including one gusher plate.
- 3) Paint clean steel with one coat Dimetcote 302H Zinc (5 WFT Mils.).
- 4) Paint two coats of Amercoat 385 Epoxy (8 WFT Mils.)
- 5) Repaint any welding burnt marks in Potable tank and surrounding areas.



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11.100 Hull, Deck and A-Frame

100-02-01 A – Hull

Paint, underwater body and waterline

Furnish labor, materials and equipment to accomplish the following in way of leaning and painting underwater body to the specifications. PAINT WILL BE OWNER SUPPLIED. SEA CHEST AND KEEL COOLERS SHALL BE INCLUDED AS UDERWATER BODY FOR CLEANING AND/OR PAINTING. The area from the keel to the waterline plus one foot of hull is equal to approximately 2,860 sq feet including skeg and rudders. Antifouling line has been raised above the load line aft of amidships approximately six inches.

- a) Provide and install suitable protective coverings over transducers and remove upon completion of painting.
- b) Clean all coolers by scraping and pressure washing.
- c) Pressure wash with 3,500 PSI entire hull from one foot above waterline to keel to remove areas of paint and anti-fouling. Remove grime, algae, sand, mud and marine growths, such as barnacles from hull.
- d) Remove all dust and spent abrasion from bottom of vessel
- e) From Waterline to one foot above waterline apply a total of three coats of one coat Dimetcote 302H Zinc (5 WFT Mils.) on any bare metal, one coat of Amercoat 385 Epoxy (8 WFT Mils.) and one coat of Amercoat 450H Poly. (4 WFT Mils.)
- f) From Waterline to Keel apply a total of 1 coats of Amercoat 385 Epoxy (1 coat at 8 WFT Mils per coat) and ABC #3 (1 coat at 8 WFT Mils per coat).
- g) Contractor shall provide a qualified person to monitor humidity and dew point throughout the painting operation to ensure application in accordance with manufactures specification.

When all underwater repairs and inspections are complete and upon approval of owner’s representative, undock vessel and provide dockside berthing.

NOTE: the vessel is equipped with the following bottom appendages: Port and Stbd keel coolers, bilge keels and transducer voids. 3 sea chest and a drop-down bow thruster.

REFER TO DOCKING PLAN FOR LOCATIONS AND DIMENTIONS

A docking plan will be provided to the contractor by the owner showing the positions of all these items.

100-02-02 A –Deck and Stern A-Fame *customer will supply all paint

Main Deck

A. Surface Prep

1. Sandblast the entire area to an SSPC-SP6 Commercial Finish.

B. Paint System

1. Apply a prime coat of Dimetcote 302H Inorganic Zinc at 4-5 mils to get 4 mils DFT.

Paint Estimate: 10 gallons



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2. Apply a full coat of Amercoat 240 Red Epoxy at 8 mils wet to obtain 6 mils DFT. Allow a minimum 6 hours before top coating;
Paint Estimate: 10 gallons
3. Apply a full coat of Amercoat 240 Haze Grey Epoxy at 8 mils wet to obtain 6 mils DFT. Allow a minimum 48 hours cure before undocking.
Paint Estimate: 10 gallons

A Frame

A. Surface Prep

1. Spot/Sand sweep the entire area to an ~~SSPC-SP6 Commercial Finish~~.

B. Paint System

1. Apply a prime coat of Dimetcote 302H Inorganic Zinc at 4-5 mils to get 4 mils DFT.
Paint Estimate: 10 gallons
2. Apply a full coat of Amercoat 240 Haze Grey Epoxy at 8 mils wet to obtain 6 mils DFT. Allow a minimum 6 hours before top coating;
Paint Estimate: 10 gallons
3. Apply a prime coat of Amercoat 450H white at 4-5 mils to get 3 mils DFT.
Paint Estimate: 5 gallons

GENERAL

1. Mix, thin, and apply all paints in accordance with PPG Product Data Sheets. Use only recommended solvents for thinning purposes.
2. No painting shall occur if the relative humidity is greater than 85% and/or the steel temperature is less than 5 degrees away from the dew point.
3. Should there be any questions contact the PPG Field Rep.

11.200 Propulsion

200-02-01 – Shaft Removal, Inspection & Re-Installation

Shipyard shall remove shafts for inspection per ABS requirements. Shaft removal shall include de-coupling from gearbox and removal of coupling from shaft. Please refer to shafting drawing included as attachment to this specification.

200-02-02 – Shaft Repairs (As Necessary)

Shipyard shall perform necessary repairs as required after inspection. To be quoted separately following inspection.

200-03-01 – Propeller Removal, Inspection & Re-Installation

Shipyard shall remove props for inspection per ABS requirements.

Furnish labor material and equipment to service propellers, stern tube and tail shafts as specified below and in the flowing references. SHAFT SEALS WILL BE PROVIDED AS NECESSARY BY OWNER.

- a) Uncouple and remove starboard and port tail shaft and propellers to machine shop (Rudders can be remove first).



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- b) Load propellers on to owner supplied truck. Owner will have propellers inspected and repaired.
- c) Survey Port/Stbd tail shafts using dye check for cracks and pits. Provide report to owner. Conduct non-destructive testing for cracks as directed by ABS inspector and/or LUMCON Marine Superintendent.
- d) Repair shafts as per owner.
- e) If indicated by inspection, remove inner and outer shaft bearings and send to appropriate bearing shop for realignment or replacement. ABS may be present for this inspection. If replacement is, recommended owner will supply cutlass bearings.
- f) Reinstall tail shafts. Reinstall propellers upon completion of repairs by heating, driving up on shafts, tightening wheel nuts and welding flat bar keeper to nuts.
- g) Provide clearances for tail shafts. Take and record bearing clearances for inner and outer bearing surfaces on both shafts.

200-04-01 -Sea Chest replacement

Furnish labor, material, and equipment to: replace existing sea chest and 6" valve with riser and stem. Current sea chest is 14 inches in diameter and 16 inches in height.

- a) Cutout and remove existing sea chest and 6" valve adjacent to sea chest.
- b) Replace with like size and new piping to valve.
- c) Paint clean steel with one coat Dimetcote 302H Zinc (5 WFT Mils.).
- d) Paint two coats of Amercoat 385 Epoxy (8 WFT Mils.)
- e) Repaint any welding burnt marks in surrounding areas



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11.300 Aux Machinery

500-02-01 A – Sea Valves Removal, Inspection & Re-Installation

Shipyard shall remove for inspection and reinstall the following quantities of Sea Valves:

- i) 1ea. 6" Gate, Space 15011C, SC/ST-ST, 150#

All Gaskets shall be replaced with owner approved non-asbestos gaskets (Garlock BlueGard or equivalent) suitable for the intended service. If necessary, flange hardware (nuts, bolts, washers) shall be replaced with new at discretion of vessel superintendent or Chief Engineer. Hardware shall be galvanized.

Scope of Supply: Replacement valves as required shall be owner furnished. Any replacement hardware (Gaskets, nuts, bolts washers) shall be supplied by the shipyard as required.

11.400 Outfitting, Coatings & Furnishings

600-01-01 – Coatings

Shipyard shall perform all staging, protection, preparation works related to application of coatings according to PPG Paint Technical Specification.

-Shipyard shall apply owner-supplied coatings in accordance with PPG Paint Technical Specification.

Shipyard shall provide unit pricing in consideration of external surface area outlined general arrangement drawing.

Shipyard shall strictly follow all guidelines as outline in the PPG paint specifications.

Shipyard shall take into account all access work and all related activities to provide a fully compliant coating system as outlined in the PPG paint specification.

Shipyard shall supply all lighting and ventilation as required.

Shipyard shall take into account Plimsoll markings to be aligned with ABS requirements.

Please reference attached Paint Specification.

Scope of supply: Owner shall supply all coating materials. Shipyard shall supply all other required materials & consumables.

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600-03-01 – Replace Anodes

Shipyard shall remove old anodes and replace with owner furnished new anodes:

- i) QTY (40) Zinc Anodes

4 References & Attachments

DWG No.	Originator	Description
N/A	PPG	Technical Paint Specification
TBC	American Bureau of Shipping	Instruction for Survey
2383-101	Arthur D. Darden, Inc	General Arrangements
2383-102	Arthur D. Darden, Inc	General Arrangements
2382-108	Arthur D. Darden, Inc	Engine Room Machinery Arrangement
2382-106	Arthur D. Darden, Inc	Fire and Safety Plan
2382-105	Arthur D. Darden, Inc	Freeing Port Arrangement
2382-104	Arthur D. Darden, Inc	Docking Plan
2382-103	Arthur D. Darden, Inc	Lines Plan
2382-109	Arthur D. Darden, Inc	Tank Capacity Plan
2382-200	Arthur D. Darden, Inc	10' Extension Structural Plans
2383-204	Arthur D. Darden, Inc	Aft Fuel Tanks & Passageway
2382-400	Arthur D. Darden, Inc	Bilge, Ballast, & Fire Piping Schematic
2382-401	Arthur D. Darden, Inc	Fuel Oil Piping
2382-403	Arthur D. Darden, Inc	Fills, Vents, and Soundings
2382-405	Arthur D. Darden, Inc	Keel Cooler Piping and Cooler Installation Details