

27 March 2002
Report No. M0202020-A

Condition Survey for Valuation
Research Vessel "NEPTUNE"

This is to certify that the undersigned independent marine surveyor representing A3Pi Services, Inc. did at the request of Haywood and Associates, and for the account of same, attend survey of the M/V "Neptune" at Chicago, IL on 27 March 2002 in order to perform a Condition Survey for Valuation and report as follows.

VESSEL PARTICULARS

Name:	"Neptune"
Official No.:	523296
Place of Build:	Breauxville, LA
Date of Build:	1 January 1970
Gross Tons:	66
Net Tons:	45
Length:	61.6 ft.
Propulsion:	Twin screw, 800 H.P. Total

GENERAL DESCRIPTION

This is an all welded aluminum vessel designed as a multi-purpose research and marine survey vessel. The hull is longitudinally framed with transverse angle web frames. The hull is divided by transverse watertight bulkheads into the following compartments:

- Fore Peak with bow thruster
- Forward Hold and tankage under forward berthing
- Galley, with tankage below
- Sonar Compartment and workroom with open bilge
- Engineroom
- Aft steering compartment and generator room

All compartments are accessible from inside the vessel except for the Forepeak aft steering, and generator room. Watertight bulkhead hatches are installed between the cabin, sonar/workroom, and the engineroom. Other compartments are entered by deck hatches in the cabin floor plate.

The vessel is powered by twin Detroit Diesel 12V-71 engines, plus a hydraulically operated, bow thruster.

The deck machinery consists of a HIAB hydraulically operated, 3000 kg (6750 lb) deck crane on the after deck.

The main accommodations include berthing for four (4) persons, (with additional berthing space in an upper cabin,) plus a galley and toilet, all located below deck. The main deck cabin aft has work benches, tables, and vinyl cushioned settees, plus a private captain’s cabin (now used for storage).

The pilothouse is located above the forward cabin, also accessed by an internal stairway. The pilothouse is fully equipped with typical navigation and communication equipment, plus numerous additional instruments for positioning, plotting, and location, used in the vessel’s research and survey work.

CONDITION SURVEY

Please note the following definitions which will be used to describe the condition of hull and machinery in the following report:

- Good - unimpaired condition without significant wear or deviation from original strength and operating efficiency. No maintenance or repair required.
- Fair - condition with wear and tear and other deficiencies of minor nature not requiring correction or repair.
- Poor - condition in which the adequacy of strength and/or operational efficiency is marginally below acceptable limits or is in doubt. Remedial action required.
- Unsatisfactory - condition of undoubtedly inadequate strength or operational efficiency. Immediate extensive repair or renewal required to reinstate serviceability.

The hull was examined as far as possible internally, and externally from the pier. The aluminum hull plate showed no signs of corrosion or electrolysis, as far as could be seen. Paint coatings were fair, but faded and dirty at the time of survey. No signs of significant damages were noted, either externally or internally and the hull condition is considered good, despite the 32 year age of the vessel. The hull and heavy aluminum framing showed no obvious signs of distortion.

Pilothouse

The pilothouse provides good visibility forward and to each side, over approximately a 235 range, with obstructed view aft, over the cabin.

The pilothouse has an internal access and a port and starboard access door. Windows are large, aluminum framed, with wood trim. Three of the five forward windows have windshield wipers.

The pilothouse interior is paneled in wood and shows some moderate wear and tear, but is in Fair to Good condition.

The following navigation, communication, and scientific equipment is installed:

- Kelvin Hughes D-22 Radar
- Honeywell Sonar – Scanner II-F
- C. Plath Autopilot & Gyro Compass
- Motorola Marine Telephone
- Motorola Marine Radio
- Triton 55/75 Radio
- Modar Radio
- Unitronics Sea-Piper 1 Loudhailer
- Internav LC 360 Loran (plus spare)
- Two (2) Bendix Sonar AN/BQS-2 W/unit in hull
- Two (2) Kelvin Hughes Recording Fathometer
- Barometer – Recording
- Raytheon Survey Recording Fathometer
- EG&G Model 259-4 Side Scan Sonar Recorder
- Magnetic Compass
- Internav LC 404 Loran
- Clock and Barometer – Brass
- Cell Phone
- Inclinator
- Sound Powered Phone
- Two (2) Searchlights
- Deck Work lights
- Kahlenberg 2-Trumpet horn

Galley

The galley is paneled in wood and shows moderate wear and tear, with the general condition Fair to Good. The following are provided:

- Fridgedair refrigerator/Freezer
- Roper electric range with exhaust hood having 4 – burners and large oven
- Microwave
- Two (2) basin stainless steel sinks
- Typical small appliances and cookware, dishes, etc.
- Panasonic Tape Deck and radio sound system

The galley equipment is old, but appears well maintained. A small mess table with seating for four (4) is installed in the galley area.

Cabin

The cabin and berthing interiors are paneled and trimmed in wood and were found in generally good condition, with only scattered signs of wear and tear.

The main deck aft cabin is accessed by a W.T. door from the open aft deck, and includes the following:

Six (6) small aluminum framed windows, two (2) each on the stern, port and starboard. Vinyl covered settees are located port and starboard. A private cabin is located on the forward starboard corner. Two storage closets are provided plus storage under the settees.

The lower forward cabin includes the following:

Four (4) bunks, two per side, built from good quality wood. Access to the bow thruster is below the deck plate. An escape hatch and ladder is located forward, with storage cabinets installed.

The midship hull compartment accommodations include the following:

A galley and mess area, aft of the berthing area, plus a W.T. door to a workroom, aft of the galley. (See the galley section for more details).

Hull Compartments

The Fore Peak tank was entered and examined and found in good general condition.

The tank beneath the berthing also has a hydraulically powered bow thruster installed. The thruster horsepower is unknown, but estimated at 75 - 100 HP.

The Forward Hold is located below the galley, and it was found in good general condition, with tankage installed.

The lower hold (behind the galley) includes the following:

A toilet, shower and sink on the starboard side, and a laundry/workroom area on the portside, with sonar equipment, electronics, gyro compass, hot water heater, and storage.

Machinery Spaces

The engineroom was thoroughly inspected and found in generally Fair condition. The following equipment was found installed:

- Two (2) G.M. Detroit Diesel 12V-71, non-turbocharged (Roots blower) propulsion engines driving through Twin Disc Model MG-512 reverse/reduction gears having a 2:1 ratio. The engine exhaust is water cooled and discharged below the deck on the transom. The engines are electric start, and also drive a JABSCO bilge pump with a manual clutch on each engine, and the starboard engine also drives a hydraulic pump for the bow thruster.
- One (1) electric driven fire and bilge pump with manifold on forward bulkhead
- Two (2) independent air compressors with a small belt driven compressor on the port engine.
- Single electric steering hydraulic pump unit
- LaMarche Inverter, 24 volt to 115 volt for refrigerator
- Honeywell DC to AC MG-Set
- Transmotor 24 volt to 180 volt MG-Set
- Navy surplus “Coolant Heater” heat exchanger system used for vessel’s hot water heating radiator system
- LaMarche Trickle Charger for engine starting batteries, including constavolt, 60 amp-24 volt system

The following poor conditions were noted:

- Insufficient insulation protection on the main engine exhaust
- No protection on exposed pumps drives, belt drives, etc.
- Gasoline cans stored in engineroom
- The engines appear to have a high level of usage (hours unknown) and may be in need overhaul (but full details unknown)

The aft steering and generator compartment was examined as far as possible with the large amount of lines and other materials stored in the compartment, and found in good general condition, as far as could be determined. The following equipment was found installed:

- Detroit Diesel model 2-71 driving a 20 KW A.C. generator, and a hydraulic power unit off the front power take off for the HIAB crane.
- One (1) Motor Generator set, 1-phase to 3-phase, rating unknown.
- Hydraulic steering rams
- Exhaust silencers for all engines

Note that the electric switchboard is also located in this aft compartment. A shore power connection is also installed on the aft exterior deck.

Weather Deck Fittings

The following mooring fittings are provided:

- Double bitt forward of the anchor windlass
- Double bitt at port and starboard stern corners
- Small kevel at port and starboard, at amidships
- 15 used aircraft tires are hung on each side

An electric anchor windlass is located on the forward deck, manufactured by Albina, Portland, OR. A Northhill 30-R anchor is provided with anchor chain and soft line attached.

A HIAB hydraulic deck crane is mounted on the aft bulwark, heavily framed to the hull below. The crane is powered by a front PTO driven hydraulic pump on the generator engine in the aft generator/steering compartment.

Located on the upper deck, on top of the deckhouse, is a 4-person, Switlik inflatable raft. The raft appears in good condition but requires an inspection and recertification. A buoyant device, floating open raft, is also provided.

An upper steering station is also provided on top of the pilothouse, with engine controls.

It was noted that the mast can be unbolted and lowered, hinged at the back surface to a deck mounted support. The mast support and rigging would need to be removed for the mast to be lowered.

The deck is surrounded by a short bulwark, with safety cable around the after working deck only. A safety handrail is installed on the forward deck, around the open deck forward of the pilot house. Safety railing is also installed on the upper deck and around the upper steering station.

SURVEYOR'S NOTES

This vessel is well built and generally well maintained. It includes a large amount of specialized electronic equipment of varying age, which is reported to be in operating condition, specialized for the survey used of the vessel. A large amount of other gear is stored onboard, in protective cases, of unknown usage.

The general condition of this vessel was considered fair to good. The deck plating and framing appeared good based on a brief internal examination. The machinery is fair and appears well maintained, however the main propulsion engines appear to be in need of an overhaul.

VALUATION

This Valuation does not account for the specialized electronic equipment on board. It is recommended that another survey and valuation of this electronics be made, using a person knowledgeable in this field. The undersigned believes this equipment may be worth over \$200,000.00, however, this is not based on any knowledge of the equipment.

In the opinion of the undersigned, based upon information supplied and the condition of the vessel at the time of survey,

The Present Day Estimated Fair Market Value
of this Vessel, in its Existing Condition
as of 27 March 2002 is:

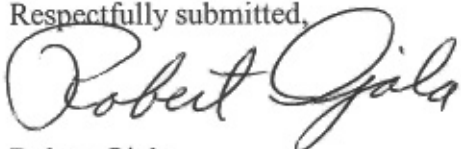
\$520,000.00

This survey and valuation has been carried out to the best ability of the undersigned, while afloat, without drilling or ultrasonic gauging of plating, without the removal of bulkheads, paneling, ceiling or other portions of the superstructure. The true condition of the underwater portions of the hull, propellers and rudders are unknown. Machinery was not operated at this time.

This valuation survey represents the overt and unbiased opinion of this surveyor but in no way it to be construed as a guarantee or warranty.

This report is for the purpose of information and record only and is made without prejudice to any persons or principals concerned. No opinion is given for items not specifically mentioned within this report or its attachments.

Respectfully submitted,



Robert Ojala
Naval Architect/Marine Surveyor
A3Pi Services, Inc.