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February 4, 2000

File No. P-0002

REPORT OF SURVEY OF

“MIKHAYA”

HIN = PEA39448M79D-P

Doc. No. 618817

This is a Prepurchase Condition and Valuation
survey conducted exclusively for
Harris Hickman



REFERENCES FOR COMMON RECOMMENDATIONS

PORTABLE FIRE EXTINGUISHERS:

- Out of date = 46 CFR 25; NFPA 302 Chapter 10-2.2
- Number of Ext. = 46 CFR 25 and ABYC A-4.6; NFPA 302 Chapter 10-2.2
- Not mounted = NFPA 302 Chapter 10-3.1

FLARES: Title 33 CFR Subchapter S, 160.137 and 175

PFD'S incl. TYPE IV THROWABLE: Title 33 CFR Subchapter S., Subpart B

MARINE SANITATION DEVICES: Title 33 CFR Part 159

MARPOL PLACKARD: Title 33 CFR Part 151

OIL DISCHARGE SIGN: Title 33 CFR Part 155

FUEL SYSTEMS - GASOLINE:

NON-METALLIC HOSES - USC 46-CFR 183.558 *requires* USCG Type A = UL 1114
= SAE 1527; *Recommended* by ABYC H-24.10 and NFPA 302-5-6.2.2

DOUBLE CLAMP FILL LINES- USC 46-CFR 183.564, ABYC H-
24(33).10.d.6; NFPA 302-5-6.3.7.

SUPPORT FUEL LINES- NFPA 302-5-6.2.5.

IDENTIFY FUEL FILL - NFPA 302-6.3.6. & ABYC H-24(33).10.1.3.

FUEL TANK BONDING - ABYC -H-24-15

FUEL SYSTEMS -DIESEL:

NON-METALLIC HOSES- USCG Type A or equivalent *recommended* by ABYC
H-33.10 .

MASTER BATTERY SWITCH - ABYC - E-9.10.e; NFPA 302-7-11.2

BATTERY BOX WITH LID OR SHIELD - ABYC -E-10

ELECTRICAL WIRE: STRANDED = ABYC -E-9.4e

WIRE NUTS = ABYC -E-9.16k

WIRE SUPPORT = ABYC -E-8.15

EXHAUST LEAKS - NFPA 302-10-2.A 302-10-2.2; ABYC -A-4.6

COMMONLY USED ABBREVIATIONS

- FRP Fiberglass Reinforced Plastic
- gal. gallon
- gel gelcoat (the smooth shiny finish on fiberglass)
- nav. navigation
- S.S. stainless steel
- ST self tailing (winches)
- PFD'S personal flotation devices (life jackets)

PREPURCHASE, INSURANCE
FINANCE, APPRAISALS, DAMAGE
SURVEYS, SEA TRIALS, TESTING



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I INTRODUCTION


The interior, bilges, thru-hull fittings, machinery, appliances, electronics, electrical, deck gear, plumbing, safety equipment, mast, sails, rigging and hull were examined. Hoses, wiring, tanks, etc. behind liners, cabinets and bulkheads and other inaccessible places and upper rigging were not examined. Any item not specifically mentioned was not inspected.

THE MANDATORY STANDARDS PROMULGATED BY THE UNITED STATES COAST GUARD (USCG), UNDER THE AUTHORITY OF TITLE 46 UNITED STATES CODE (USC); TITLE 33 AND TITLE 46, CODE OF FEDERAL REGULATIONS (CFR), AND THE VOLUNTARY STANDARDS AND RECOMMENDED PRACTICES DEVELOPED BY THE AMERICAN BOAT AND YACHT COUNCIL (ABYC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAVE BEEN USED AS GUIDELINES IN THE CONDUCT OF THIS SURVEY.

Findings reflect conditions observed **AT TIME OF SURVEY.**

This report is issued without prejudice, solely for the use of the purchaser. It is based on the professional observations by the undersigned marine surveyor. This survey report is issued subject to the condition that neither the surveyor nor his employing firm are to be held liable for errors of any kind. This includes omission, negligence, inaccuracy, misrepresentation or misstatement in this report, or in his performance as a marine surveyor. This report represents a statement of observed conditions and is neither a guarantee nor a warranty of seaworthiness, fitness or of the condition of the vessel, its hull, machinery, unforeseen or undetected damages or other conditions that may exist.

II GENERAL INFORMATION

| | |
|--------------------------------|--|
| FILE NO. | P- 0002 |
| TYPE OF SURVEY | Prepurchase |
| NAME OF VESSEL | "MIKHAYA" |
| YEAR, MAKE, MODEL | 1979 Pearson 35' |
| HULL IDENTIFICATION NO. | PEA39448M79D-P |
| DOCUMENTATION NO. | 618817 |
| MANUFACTURER | Pearson Yachts, Portsmouth, RI. |
| BUYERS NAME | Harris Hickman |
| BUYERS ADDRESS |  |
| TYPE VESSEL | Sailing sloop |
| LENGTH OVERALL | 35' |
| BEAM | 10' |
| DRAFT | 3' 9" |
| DISPLACEMENT | 13,000 Lbs. |
| LAST HAULED | October 1999 |
| SURVEYED AT | Telemar Bay Marina, Indian Harbor Beach, FL |
| IN/OUT OF WATER | Out of the water |
| TYPE KEEL | Full keel with centerboard |
| PROPULSION SYSTEM | Westerbeke diesel |
| SCOPE | The vessel was inspected in the water, sea trialed under engine and sail, hauled and the bottom inspected. |

III SYSTEMS

A. HULL, DECK AND SUPERSTRUCTURE

Construction is FRP, including beams and stringers, with Awlgrip finish and molded-in non skid in walk areas. It is reinforced by a liner inside with teak veneer over plywood bulkheads. The topsides and deck are excellent in appearance with very few gel cracks. There are teak handrails along the cabin top, teak toerails, cabin trim and cockpit coming trim. The vessel is equipped with S.S. bow and stern rails, teak outboard bracket, double lifelines on S.S. stanchions, S.S. and teak stern ladder, teak bow pulpit with two anchor rollers and an anchor and chain locker in the foredeck. The mooring cleats are four bolt cast aluminum. There are two aluminum hatches, in addition to the companionway, four large and three small fixed ports and one small opening port in the head. A wind generator is mounted aft of the cockpit. The cockpit is exceptionally large and roomy. It is protected by a Bimini top on S.S. frame and dodger.

DECK EQUIPMENT:

| | |
|--------------------------------|---|
| DOCKLINES - | 5/8" nylon |
| LIFELINES / RAILS - | Double lifelines on S.S. stanchions |
| BOW & STERN RAILS - | Both are S.S. |
| AWNINGS - | Bimini on S.S. frame |
| APPEARANCE - | Excellent |
| OTHER - | Two boat hooks, fenders, horseshoe Type IV PFD in S.S. Holder, teak cockpit table, emergency steering tiller. |

B. CABIN INTERIOR

The interior is an off-white FRP liner with teak trim, teak veneer over plywood bulkheads and teak and holly cabin sole. The layout is: vee berth forward with 40 gal water tank, Lectra San and storage under and hanging locker and drawer storage. Aft is head & shower to port, hanging locker and drawer storage to stbd; aft is the main cabin with settee/berths on each side that slide out to make a double berth. Both have 20 gal. Water tanks under. The galley is across the aft end of the main cabin.

C. PROPULSION SYSTEM

"MIKHAYA" is propelled by a 30 Hp Westerbeke diesel which is fresh water cooled. The engine, belts, hoses, shaft, mounts and fluid levels were inspected and no defects were found except as noted in Recommendation C2.

| | | |
|---|---------------------------|-------------------------------------|
| MAKE ENGINE - Westerbeke | TYPE - Diesel | YEAR - 1979 |
| NO. CYLINDERS - Four | MODEL - 30 | HOURS - 793 |
| HORSEPOWER - 30 | FUEL LINE - Copper | |
| VENTILATION - Blower | SERIAL NO. - 19203 | |
| COOLING - Fresh water | EXHAUST - Wet | Alternator - 90 Amp, new '98 |
| REDUCTION GEAR - SAO Westerbeke/Paragon direct drive | | |

D. ELECTRICAL SYSTEM

The house system is 12 volts DC, supplied by five 12 volt, deep cycle, marine batteries and controlled by a new circuit breaker distribution panel. Batteries are charged underway by the alternator and at dockside by the three stage battery charger. One bank of batteries can be used to charge another through the Echo charger. A 1000 watt inverter allows 120 volt AC use when underway. There is also a 120 volt AC shore power system with one cord for use at dockside. It is controlled by a separate circuit breaker panel. Wiring is properly bundled and supported at least every 18". The panels, wiring and electronics were inspected and no defects were found.

DC POWER - Yes **VOLTS** - 12 **NO. BATTERIES** - Five deep cycle

AC POWER - Yes **VOLTS** - 120 **NO. CORDS** - One

WIRING TYPE & CONDITION - Stranded copper, PVC insulated.

LIGHTS WORKING - Yes

CIRCUIT BREAKERS OR FUSES - Circuit breakers on both systems.

GENERATOR- Air Marine 403 wind generator

ALTERNATOR - 90 Amp

BONDING SYSTEM- Yes

BATTERY CHARGER- True Charge 20, Heart Interface/inverter and Echo Charger

LIGHTENING PROTECTION- Yes

INVERTER - "Ample Power 1000"

AIR CONDITIONING - Cruisair

OTHER - Link 10, DC system monitor

E. FUEL SYSTEM

The fuel fills, hoses, lines and filters were examined and no defects were found.

TYPE FUEL - Diesel **TANK (S)** - (2) 19 Gal. Monel + 13 Gal. Plastic feeder tank.

FUEL LINE- Copper and Type A **FILL**- properly labeled, bonded, has Type A hose

FILTERS - Racor in line and final engine filter.

F. GALLEY / FRESH WATER SYSTEM

Fresh water is supplied by three tanks totaling 80 Gal. and pressurized by a Par 12 volt pump. There is also a manual foot pump for back-up. Potable water is filtered by an in-line carbon filter (see Recommendation C5). The stove is three burner with oven. The fuel is alcohol from a remote two gal. tank. There are "Y-valves" in the cockpit scuppers to divert rain water into the fresh water tank. The galley pump and hoses were replaced in June 1999.

STOVE - HilleRange **FUEL** - Alcohol **COMPLIANCE**- Yes

TANK LOCATION - Remote, Two Gal. **SINK** - Single large S.S.

PRESSURE WATER - Par Mate 2.5 gpm. pump

HOT WATER - New '99, 6 gal. "Super Stor"

REFRIGERATION - Adler Barber 12v. Cold Machine

G. HEAD / SANITATION SYSTEM

The head functioned properly.

NO. HEADS - One **TOILET MAKE** - Raritan (manual)

SINK - S.S. **SHOWER** - Yes

TYPE SANITATION SYSTEM - Raritan LectraSan

H. STEERING SYSTEM

Edson mechanical system with S.S. destroyer wheel, controls and compass on binnacle. Cable and quadrant were inspected and no defects were found.

I. GROUND TACKLE

The teak bow pulpit has two anchor rollers and a plow anchor one it. The anchors are: 25# plow with 3/8" chain and 5/8" nylon rode (See recommendation C1) 22# Danforth with 3/8" chain and 1/2" nylon rode.

J. ELECTRONICS / NAVIGATION

| | |
|------------------------|----------------------------|
| VHF RADIO - | West Marine MC 795 |
| DEPTH SOUNDER - | Datamarine S200DL |
| KNOT METER - | Datamarine S100KL |
| APPARENT WIND - | Datamarine Wind Machine |
| COMPASS - | Ritchie binnacle mount |
| AUTOPILOT - | (2) Autohelm 3000 |
| GPS - | Garmin GPS 45 |
| OTHER - | Jensen stereo, tide clock. |

K. BONDING SYSTEM

All systems, chain plates, engine, thru hull fittings and electronics are bonded to a bonding plate on the hull with # 8 wire. (See recommendation C7).

L. OUT OF WATER INSPECTION

The hull was sounded with a phenolic hammer and no gel blisters, delamination or other defects were found. There were no indications of electrolysis on the running gear. Rudder & cutlass bearings were inspected and no defects were found.

THRU-HULL FITTINGS - Bronze

VALVES - Bronze sea cocks

PROPELLOR - Three blade bronze

SHAFT - Stainless steel

BEARINGS - Cutlass

DOUBLE HOSE CLAMPS ON ALL THRU-HULLS ? Yes

STEERING SYSTEM- Mechanical

RUDDER - Hinged on keel

KEEL (TYPE)- Full with centerboard

BALLAST - Lead, encapsulated

M. SAFETY EQUIPMENT

COAST GUARD REQUIRED EQUIPMENT ON BOARD

FIRE EXTINGUISHERS - Two 10BC (See recommendation A2)

FLARES - Numerous (See recommendation A3)

HORN - Compressed air

PPD'S - Four type II, one type IV horseshoe, four child's type II, Five type IV cushions

PLACARDS- Proper placards were on board

NAV. LIGHTS- Working

OTHER SAFETY EQUIPMENT

BILGE PUMP (S) Rule 2000 auto electric with Water Witch switch and manual pump.

N. SEA TRIAL -

The engine started easily, did not smoke and ran well. The temperature and oil pressure remained in the normal area throughout the sea trial. The sails were raised, although there was not enough wind to sail, for a thorough inspection. The maximum RPM's the engine turned under load was 2390, which is close to the theoretical maximum of 2500 and the bottom had some growth.

O. SAILING VESSEL DATA

Subject vessel is sloop rigged with a Farnet Jib Furler.

RIGGING : (See recommendation A4)

WIRE SIZE: Uppers - 1/4"

WIRE TYPE- 1 X 19 S.S.

Lowers - 7/32"

Headstay - Under furler

Backstay - 1/4"

SPARS - Aluminum

SPREADERS - One set, aluminum

WINCHES - All Lewmar: two # 42ST; two # 16 - 2 speed; 2 # 8's.

SAIL COVERS - Sunbrella

RUNNING RIGGING - Dacron yacht braid

MAST is stepped on deck.

CHAINPLATES were inspected from deck level and no defects were found. Chainplates were not removed to inspect the underside. (See recommendation C6)

OTHER - New boom vang and halyards 8/99

SAILS:

| <u>TYPE SAIL</u> | <u>SIZE</u> | <u>MAKE</u> | <u>CONDITION*</u> |
|------------------|-------------|-------------|-------------------|
| MAIN | 2 + 2 | SouthSails | New 10 |
| Genoa | 135% | Ulmer | 5** |

*On a scale of 1 to 10, where 1 is worn out and 10 is new.

** Needs repair on the sacrificial strip

IV FINDINGS AND RECOMMENDATIONS

A. SAFETY DEFICIENCIES

These are deficiencies that would represent a danger if not corrected before the vessel is used again or would be in violation of the law.

1. The positive terminal on the batteries is not protected.
Install terminal insulators or battery box covers to prevent accidental contact with the positive terminal.
2. Both fire extinguishers are out of date, which is in violation of 46 CFR 25.
Replace with three 1A10BC as recommended by ABYC-A-4.6.
3. Flares are out of date.
Replace with at least three red flares as required by Title 33 CFR Subchapter S, 160.137 and 175.
4. The lower swages are cracked on the following shrouds: port aft lower, port upper, Stbd fwd lower, Stbd upper and stbd all lower.
Five of the eight shrouds and stays are cracked. They are all about the same age, so I recommend that all shrouds and stays be replaced.

B. OTHER DEFICIENCIES NEEDING ATTENTION

These are deficiencies that should be corrected in the near future so as to maintain standards, prevent problems and help retain the vessels value.

1. Several seacocks were stiff.
These should be lubricated and exercised frequently to prevent their seizing.

C. MAINTENANCE

1. Chain on the plow anchor is badly rusted.
Replace as soon as practical.
2. Engine room vent hose is broken.
Replace the hose.
3. The rudder stuffing box is leaking.
Tighten the stuffing box; if this does not stop the leak, repack the stuffing box.
4. There is rust on engine mounts and rear of engine.
Wire brush, treat with Ospho and repaint.
5. The filter on the fresh water system has sediment.
Replace the filter element.
6. Some rust is apparent on the chainplates.
Remove and inspect the backside of the chainplates for crevice corrosion. Replace any that have deteriorated and rebed with a sealer to exclude moisture.
7. Corrosion was found on bonding wire terminals.
Clean and reattach terminals.
8. Spreader lights are hanging loose on the spreaders.
Resecure spreader lights.

D. SURVEYORS NOTES AND OBSERVATIONS

Shrouds were inspected from deck level. Chainplates were not removed and inspected on the back side.

V SUMMARY AND VALUATION

A. As a result of my investigations, as stated in the **SYSTEMS AND FINDINGS AND RECOMMENDATIONS** section of this **REPORT OF SURVEY**, and by virtue of my experience, my opinion is that the **OVERALL VESSEL CONDITION IS -**

"ABOVE AVERAGE".

B. **STATEMENT OF VALUATION**

The "**FAIR MARKET VALUE**" of subject vessel is:



The "**ESTIMATED REPLACEMENT COST**" of subject vessel is:



C. **SUMMARY**

This vessel has had three owners; it was allowed to run down after the death of the second owner; however, the third owner replaced much of the equipment and improved its condition dramatically, thus, it is in "Above Average" condition. The intended use is pleasure on inland and near coastal waters. The vessel is suitable for this intended use with a capable skipper.

D. SURVEYORS CERTIFICATION

I certify that, to the best of my knowledge and belief:

The statements of fact contained in this report are true and correct.


The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal unbiased professional analyses, opinions and conclusions.

I have no present or prospective interest in the vessel that is the subject of this report and I have no personal interest or bias with respect to the parties involved.

My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.

I have made a personal inspection of the vessel that is the subject of this report.

This report is submitted without prejudice and for the benefit of whom it may concern.


Edward A. Carter, A.M.S.S.
Attending surveyor

Feb. 4, 2004
Date


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HULL IDENTIFICATION NUMBER

I CERTIFY THAT THE RUBBING OF THE HULL IDENTIFICATION NUMBER WHICH APPEARS BELOW ON THIS DOCUMENT WAS PERSONALLY TAKEN BY THE UNDERSIGNED ON THE DATE INDICATED BELOW. THE HULL IDENTIFICATION NUMBER IS IN AGREEMENT WITH THE VESSEL'S PAPERS.



HEA 33448M79D-R


Edward A. Carter, A.M.S.

Feb 4, 2000
DATE

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PHOTOGRAPHS



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