

CONDITION SURVEY

VESSEL: Tug "NOELANI"

File No. 08107

This report is issued in accordance with the terms and conditions attached as enclosure No. 1

This is to certify that the undersigned Marine Surveyor did on August 21 & 22, 2008, acting at the request of Mr. Ron Greger, and for the account of Whom Concerned, attend on board the vessel "NOE LANI", while at The Marine Group Shipyard, Chula Vista, California, for the purpose of performing a Condition and Valuation Survey. At the time of survey the vessel was hauled out and blocked on the hard.

GENERAL INFORMATION

1. *Vessel Name:* "NOELANI"
2. *Official Number:* 1186783
3. *Hull Identification No. (HIN)* N/A
4. *Owner:* Greger Leasing Corp

5. *Address:* 4225 Solano Ave Suite 562 Napa, CA
94558
6. *Home Port:* Honolulu, HI
7. *Gross Tons:* 142
8. *Net Tons:* 96
9. *Builder:* Marionette Marine
10. *Year Built / Rebuilt:* 1966 / 2007
11. *Intended Service:* General Ocean/Coastal & Harbor Towing
12. *Cruising Speed/ Range:* 7.5 knots / 5,232 NM (see comments
below)
13. *Last Dry Docking:* 2008

14. *Conversions/
Modifications:*

In 2006 the vessel was converted from a Navy tug into an ocean/coastal towing vessel by addition of modern electronics and a state of the art towing winch.

The vessel had a major rebuild after an electrical fire in 2007 with the following accomplished:

- All burned wiring and insulation removed from the engine room and engine room flat.
- Engine room internal surfaces were steam cleaned and chemically treated and then recoated.
- The electrical switch panel was rebuilt
- New marine grade electrical wiring was installed from the switch gear to the subpanels
- New electrical subpanels in passageway
- New insulation installed in the engine room flat
- Two new gensets were installed (Northern Lights 65 kW)
- One new skid mounted 25kW Northern Lights genset
- New starters and enclosures on all electric motors in engine room
- Main engine was found to be undamaged and was repainted
- All engine room piping was color coded
- New washer/dryer and welder installed engine room flat
- The external hull topsides and house was water blasted and recoated, new non-skid applied on decks
- New aft steering station enclosure installed
- Install 3 new Furstrum grid coolers for new gensets
- New upper aluminum pilothouse

installed sitting on legs. Upper house has height of eye of 42'.

During the August 2008 haulout the following was accomplished:

- Installation of a Thrustmaster TH-200RN retractable azimuthing bow thruster rated at 9,400lbs lb. thrust / 450 HP powered by a Cummins model M14TA diesel engine S/N 46171664 with hydraulic pump.
- Installation of a Wesmar Vortex M/N V2-36 tunnel thruster developing 8,900 lb. thrust / 350 HP, powered by a Cummins NTCC 400 diesel engine.
- Both thrusters are fresh water cooled through Furnstrum grid coolers inset in pockets in the hull.
- Trailing edge of rudder boxed and wedged to improve performance.

General Information Comments:

At 7.5 knots with the current fuel capacity estimated at 54,500 gallons, using a 20% reserve and a 62.5 GPH fuel burn the range is 5,232 NM.

VESSEL PARTICULARS

1.	<i>Length Over All:</i>	108.3'
2.	<i>Registered Length:</i>	102.7'
3.	<i>Beam:</i>	28.9'
4.	<i>Draft:</i>	12' (estimated)
5.	<i>Depth:</i>	16.3'
6.	<i>Shell Plate:</i>	5/8" welded steel plate
7.	<i>Superstructure:</i>	Various thickness welded steel plate
8.	<i>Transverse Frames:</i>	6" x 3" x 3/8" angles, 24" on center; 12" x 3" x 3/8" "T" bar deep webs 8' on center

GENERAL DESCRIPTION AND ARRANGEMENT



The tug "Noelani" is an all welded steel hull ocean / coastal towing vessel. The vessel is configured as a "Combi-Tug" with a 2000 hp diesel engine for the main propulsion with a conventional propeller and rudder arrangement, and a 250 hp retractable Z-drive and a 350 hp tunnel thruster forward.

On the foredeck is a bullnose. On the port side of the foredeck is an escape hatch from the forepeak berthing area. The deck is surrounded by heavily braced, 27" high solid bulwarks that are capped forward with split pipe caps. Located fore and aft on each side are single cruciform bits on each side followed by double mooring bits which are connected to the main deck and extend above the bulwark tops.

On the aft deck is a large, refurbished Almon Johnson single drum tow winch equipped with a Canadian Link level wind, horizontal warping head on the starboard side and a suitcase drum on the port side for an under rider wire.

Located all the way aft is a raised trunk over the steering gear, which are fitted with hydraulic tow pins.

The main deckhouse is equipped with watertight dog-down doors on each side and at the aft end leading to the winch room.

Located in the main deckhouse forward is the galley.

Aft to port and starboard is a head followed by a single berth stateroom.



The engine room flat extends down the centerline to the aft end of the main

deckhouse. Located forward at the centerline is a stair leading down to the forward berthing area. There is another stair from the starboard side leading up to the pilothouse.

The pilothouse sits one step above the 02 deck. The pilothouse is equipped with a console forward with all modern navigation equipment installed consisting of one full sized ARPA radar, one smaller backup radar, a computer system with a flat panel display containing a chart plotting software package, a gyro-compass, a Speery helm station and various support navigation instruments. There are two helm chairs on each side forward.

Located forward on the 02 deck is a manually controlled fire monitor supplied by a 6" pipe from the fire main. The 02 deck is surrounded by a 38" tall double course safety rail. There are drum type fender brackets; two forward on each side and one aft on each side, which currently do not contain the rubber fender portions.

Located aft to starboard is a stairway leading down to the main deck. Located to starboard of the stair is an aft deck control station enclosed in an aluminum deckhouse fitted with windows and a watertight door and equipped with engine controls, rudder controls and pneumatic winch controls, as well as a manually controlled searchlight. The winch brake controls are located along the aft end railing. There is an additional manual fire monitor located on the 02 deck aft of the centerline. There is a lifejacket locker located on the aft deck to port of the ship's funnel and an Orville Hook setup contained in an aluminum box to port aft.

A stairway leads up to the upper pilothouse, which sits atop 4 legs and is constructed of aluminum with angled windows around. The pilothouse is surrounded by a double course safety rail.

Located on each side of the 02 deck are gates in the safety rails leading to ladders to the main deck.

At the time of survey all exterior decks had applied nonskid noted to be in good condition.

In the hull forward is the forepeak fuel tank, which carries approximately 5,000 gallons of fuel. Aft of the forepeak fuel tank and just forward of the forward machinery space is an additional 2250 gallon fuel tank. The forward machinery space sits forward of the forward crew's quarters and contains the prime movers for the two thrusters (450 hp retractable Z-drive and 350 hp tunnel thruster).



The forward crew quarters sits above the forward port and starboard fuel tanks and above the #2 port and starboard fuel tanks. The engine room sits aft of the crew's quarters, above port and starboard and centerline bottom fuel tanks. There is a dirty oil tank, which sits aft on the centerline, below the propeller shaft. There are liquid foam tanks, for the foam/water fire fighting system, which sits on the

port and starboard sides above the propeller shaft.

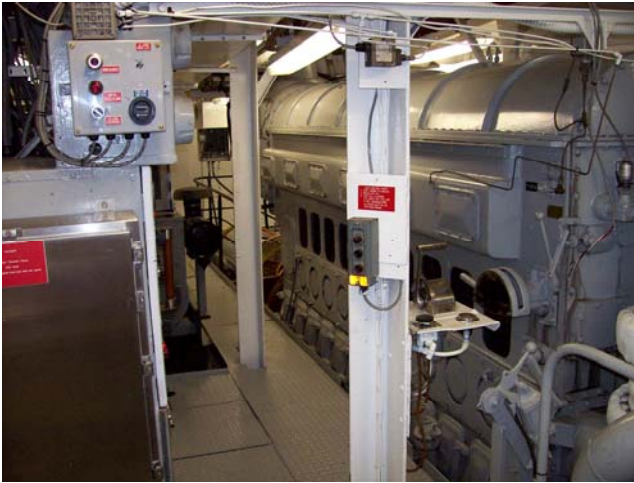
The potable water tanks sit on the centerline above the propeller shaft. Aft of the engine room is a single fuel oil tank, converted from the old bosun's locker. There are stern fuel oil tanks on the port and starboard side aft of the converted storeroom tank and port and starboard lube oil tank that sits inside the converted storeroom lube oil tank. The port and starboard aft ballast tanks have been converted into fuel tanks.

The aft most compartment is the lazarette, which contains the vessel's steering gear.

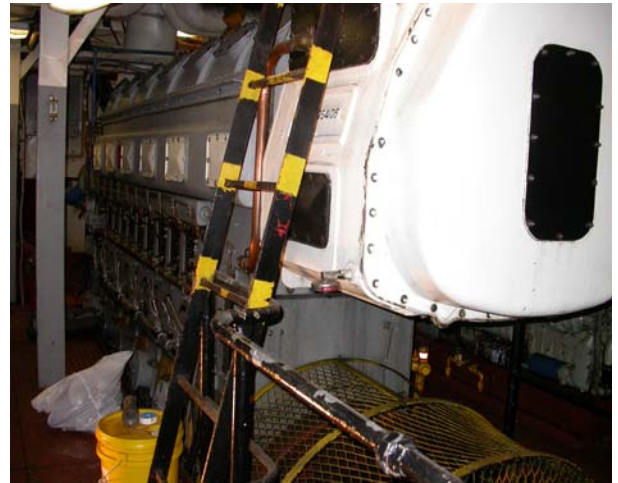
The bow is nearly plumb and the stern is round. The vessel has a deep keel, moderate dead rise and round chines. There is a semi-balanced foil spade rudder, which is not equipped with a skeg or bottom bearing support system. The single, open 4-blade stainless steel propeller is 144" (12') in diameter and is fitted to a stern bearing housed at the end of the skeg shaft log.

This vessel is heavily fendered with extruded solid rubber blocking wrapping around the shear. There is a second section of heavy rubber blocking extending from the bow area around the vessel to approximately amidships. The bow fendering system consists of heavy looped rubber fenders, completely wrapping the bow and stem area.

PROPULSION



Main Engine



Engine ID Plate



Reverse / Reduction Gear

- | | | |
|-----|---------------------------------|---|
| 1. | <i>Number Of Engines:</i> | One |
| 2. | <i>Fuel:</i> | Diesel |
| 3. | <i>Make/Model:</i> | Fairbanks-Morse, Model 38D 8 1/8 |
| 4. | <i>Total Horsepower:</i> | 2,000 at 850 rpm |
| 5. | <i>Serial Numbers:</i> | 970522 |
| 6. | <i>Engine Hours:</i> | 4,000 (estimated-see comments) |
| 7. | <i>Cooling:</i> | Freshwater through heat exchangers |
| 10. | <i>Exhaust:</i> | Dry stack |
| 11. | <i>Starting:</i> | Pneumatic |
| 12. | <i>Reverse/Reduction Gear:</i> | Western Gear Sea Master Marine Gear, Model 157PCMR-S, Serial N ^o 169 |
| 13. | <i>Gear Ratio:</i> | 5.691538:1 |
| 14. | <i>Engine/Gear Foundations:</i> | Integral Welded Steel Girders |

Propulsion Comments:

1. The insured vessel's main propulsion is a 2,000 hp Fairbanks-Morse opposed piston engine. These engines are commonly used as large industrial gensets and locomotive power plants and are similar in design and service usage to Electro Motive Diesel (EMD) engines.
2. The opposed piston engine design allows the engine to be set up either as a conventional one direction engine to be used through a reverse/reduction gear or as a direct reversible engine because the engine does not use cams or valves, but instead uses ports for fuel/air intake and exhaust discharge. This also allows direct injection of starting air into the cylinders, which is somewhat more efficient.
3. The engine is equipped with crankcase explosion vents for safety.
4. Engine cooling is by seawater pumped through a closed circuit freshwater heat exchanger located on the starboard side of the engine room. Directly above the cooling water heat exchanger is a lube oil cooler, also cooled by seawater pumped through the tube cooler.
5. Actual Engine hours are estimated at approximately 4,000 since a complete rebuild.
6. Vessel is also equipped with a Thrustmaster TH-200RN retractable azimuthing bow thruster reportedly upgraded to 450 HP powered by a Cummins model M14TA diesel engine S/N 46171664. This additional propulsion acts to increase the overall horsepower rating of the vessel, gives the vessel increased maneuverability (exceeding a twin screw vessel) and acts as a backup emergency propulsion system in case of breakdown of the main engine. Because the diesel/hydraulic powered unit can be started from the pilothouse is also serves as backup steering in the event of a steering casualty while maneuvering.
7. Vessel is also equipped with a Wesmar Vortex M/N V2-36 tunnel thruster developing 8,900 lb. thrust / 350 HP, powered by a Cummins NTCC 400 diesel engine.
8. Total propulsion horsepower (including thrusters) is 2800 HP.

AUXILIARY EQUIPMENT

1. *Auxiliary generator(s):* (2) John Deere Powered Northern Lights 65 kW Primary gensets; (1) Northern Lights NL844LW2.1, 25 kW radiator cooled backup genset
2. *Rating:* (2) primary 65 kW; Backup 25kW
3. *Gen. Hours:* Port 712 hrs; Starboard 944 hrs.; 25 kW 2,410 hrs.
4. *Cooling:* Primary gensets are freshwater through grid coolers; Backup is radiator cooled
5. *Exhaust:* Dry stack with water cooled exhaust manifolds and completely lagged exhaust pipes
6. *Pumps/Auxiliary Equipment:*
 - Lube Oil Transfer Pump Powered by 3 hp 208V AC Three-phase motor.
 - Engine Pre-lube pump powered by 25 hp 208V AC Three-phase Motor.
 - Two Cooper Industries two stage air compressors powered by 10 hp 208V AC three phase motors seating two 250 psi air receivers and two smaller 150 psi air receivers.
 - One Wilkerson compressed air dryer.
 - One Donco 175 psi air receiver for dry compressed air.
 - Two Vickers high capacity hydraulic pumps, each powered by 30 hp 208V AC three phase electric motors with a 135 gallon hydraulic tank and 5 hydraulic oil filters.
 - One Detroit Diesel 671 Engine Serial N^o 6A131106 powering the vessel's Crane Demming 6" fire pump through a Twin Disc manual clutch. The engine has 567 hrs (per meter)
 - One Hotstart Manufacturing Model SP0L3P120208-1HPFC-NAD, Serial N^o 007 Diesel fuel

preheating system.

- Blackmer Model NB foam fire fighting system pump powered by a single 25 hp 208 VAC electric motor. The foam fire fighting system appears to be partially disconnected but in serviceable condition. Reportedly there are two foam tanks built in on each side in the bilge area, integral to the hull.
- Gil Inc. Model MIL-F-15618 Class 1 fuel water filter – separator.



25 kW Backup Genset



Air Compressors



Main engine pre-lube pump



65 kW John Deere Primary Gensets



Bilge/ballast manifold



Fire pump auxiliary



Fuel Transfer Pump



Fuel oil transfer manifold

AC ELECTRIC



AC electric power is through either 208V AC three phase genset or 208V AC three phase shore power through a custom built electrical switch panel with a slide bar to prevent simultaneous energization of power sources.

The main breaker panel has circuit breakers for large AC motors and/or sub panels. There are three sub panels in the engine compartment

and two sub panels located in the port side passageway, aft of the galley.

AC shore power runs through a Square D 30 KVA isolation/step-down transformer before the shore power circuit breaker.

DC ELECTRIC

There are three gp. 27 sized 12VDC wet cell batteries in the engine compartment, each with its own parallel cutoff switch, for cranking motors for the two gensets and the single fire main engine. These batteries are charged by a engine driven alternators.

MISCELLANEOUS EQUIPMENT AND SYSTEMS

1. *Marine Sanitation Device:* Gatzgard Inc. Marine Sanitation Device (MSD) MK-IIA.
2. *Bilge Pumps/Piping:* One Gorman Model 92B10B Bilge/Ballast/ Fire pump powered by a 5 hp 208V AC three phase electric motor. Second bilge/fire pump, no manufacturer information or id plate. The pump appears to be a 2" x 2" pump and is powered by a 20 hp 208VAC electric motor.

The bilge/ballast manifold/piping system appears to be either copper or Monel, which would be considered a non-corrosive metallic piping. Manifold and

- valves are well laid out and labeled and are located at the aft port side of the engine room.
3. *Bilge Pumps Tested:* No
 4. *Domestic Water System:* Gould freshwater pump powered by 1/3 hp 208V AC electric motor with a 30 gallon pressure tank and a GE 20 gallon electric hot water heater.

 5. *Ventilation:* 208 VAC forced fan ventilation into engine room
 6. *Hvac Systems:* 208 VAC built in electric element heaters located throughout vessel.
 7. *Alarms:* Alarm Switchboard model H632000261928 with the following alarm sensors:
 - Main engine lube oil pressure low
 - Main engine high water temperature
 - Main engine low oil pressure
 - Clutch air pressure low
 - Reduction gear lube oil pressure low
 - Engine room bilge level high
 - Lazarette bilge level high
 - Low day tank level
 - High day tank level
 - Fire detection system in engine room and galley
 - Genset package with automatic shut down
 - Thrustmaster high water temperature
 - Thrustmaster low oil pressure
 - Tow winch payout alarm

STEERING SYSTEM

1. *Number Of Stations:* Two (pilothouse and 02 deck aft)
2. *Description/Type Of Equipment:* Hydraulic steering pump system, which is a manufactured hydraulic power pack containing a robust appearing hydraulic pump powered by a single 15 hp 208VAC three phase electric motor. The hydraulic

steering system has a redundant backup



steering pump powered by a single 1 hp VAC 208V three phase electric motor. The redundant hydraulic pump uses the same hydraulic oil sump. There is a "T" in the supply line to this pump with valves and a fitting so that an alternate hydraulic source could be connected.



Steering controls are low voltage electric jog levers to electric pilot valves.

The steering gear is located in the lazarette and has two hydraulic rams connected to a double acting tiller arm.

There is a stub off of the rudderstock that an emergency tiller can be fitted to. The emergency tiller is purpose built and is set up for a block and tackle arrangement to be fitted off of the port and starboard bulwarks aft.

PROPELLER(S) SHAFT(S) RUDDER(S)

1. *Shaft Size:* 9.25"
2. *Material:* Mild steel fiberglass wrapped
3. *Struts:* Propeller shaft is mounted in shaft log
4. *Bearings:* Bronze shelled cutless and pillow block
5. *Stuffing Box:* Bronze stuffing box
6. *Propeller Size/Type:* 4-blade 144" x 96"
7. *Material:* Stainless steel
8. *Condition:* Adequate for continued use
9. *Rudder Description:* Semi-balanced steel foil supported by a rudder shoe extended off of the bottom of the skeg.
10. *Rudder Stuffing Box:* Bronze stuffing box



CORROSION CONTROL

1. *Zincs:* On underwater wetted metals
2. *Condition:* New at time of survey
3. *Bonding System:* N/A (steel hull)
4. *Other:* None

THROUGH HULL CONNECTIONS

The vessel is equipped with three sea chests as follows:

Main sea chest is on the bottom engine room forward bilge, just forward of the centerline. There is a 6" bronze globe valve for the main engine seacock and a 4" bronze gate valve for the generator/auxiliary engine cooling water. Water runs

through bronze housed strainers for both lines, which are set up as duplex strainers.

There is an auxiliary high sea chest at the starboard side, just above the chine area. The auxiliary high sea chest contains a 6" gate valve for the main engine sea suction and a 4" gate valve for the genset sea suctions.

The third sea chest is on the port side aft end of the engine room as for the fire pump. The sea chest contains a bronze 8" gate valve for the fire pump. There is a 3" gate valve for auxiliary equipment off the side of the sea chest. In addition, the fire pump can be used as an emergency bilge suction. There is an 8" gate valve located just to port of the aft end of the reduction gear, which, when opened, pulls the suction from a low point of the engine room bilge.

The port aft sea chest provides priming water for the bilge/ballast/fire pumps located just aft.

All of the sea chest valves and piping appear to be in good condition with inspected. We noted that any unused lines had been removed from the valve and the valves blanked off. Additionally, any unused lines had the valves shut and lashed with either wire or nylon wire ties.

At the time of survey all of the seacock valves were removed for servicing

TANKAGE

- | | | |
|-----|---------------------------|---|
| 1. | <i>Fuel Tanks:</i> | Eleven |
| 2. | <i>Total Capacity:</i> | 54,250 gallons (estimated-see comments below) |
| 3. | <i>Material:</i> | Integral welded steel |
| 4. | <i>Grounding:</i> | Yes |
| 5. | <i>Shut Off Valves:</i> | At each tank. Day tank has remote fuel shut offs. |
| 6. | <i>Vents:</i> | Yes, equipped with check valves |
| 7. | <i>Vent Screens:</i> | Yes |
| 8. | <i>Fresh Water Tanks:</i> | One |
| 9. | <i>Total Capacity:</i> | Estimate 3,000 gallons |
| 10. | <i>Material:</i> | Integral welded steel |
| 11. | <i>Other:</i> | Lube oil (estimate 600 gallons)
Dirty oil (estimate 2,000 gallons)
Hydraulic oil (estimate 500 gallons) |

GALLEY EQUIPMENT



The galley, located in the main deckhouse forward, contains a 208VAC electric commercial range to port aft, a stainless steel preparation counter/sink/cabinet arrangement along the port side, and a permanent dinette eating area on the starboard side, forward. There are (3) Magic Chef refrigerators on the starboard side aft.



GROUND TACKLE

- | | | |
|----|------------------|-------------------------------|
| 1. | <i>Anchors:</i> | 600 lb. (estimated) Navy type |
| 2. | <i>Windlass:</i> | Integral to forward capstan |
| 3. | <i>Chain:</i> | See comments below |
| 4. | <i>Rode:</i> | N/A |



Ground Tackle Comments:

The anchor could be deployed in an emergency and retrieved by using the capstan and pulling the anchor over the bulwarks, or using the crane.

FIRE AND SAFETY

1. *No. Portable Extinguishers:* Seven
2. *Type/Size:* See table in comment section
3. *Date Last Inspection:* 12/2007
4. *Type Of Fixed System And Size:* B-V Semi-portable in engine room (see comments)
5. *Approximate Size Of Engine Space:* N/A
6. *Date Last Inspection:* N/A
7. *Fire Main, Hose, Nozzle:* (1) station on main deck and (2) in engine room
8. *Fire Axe:* (2), one on bow and one on stern mounted in brackets on deckhouse
9. *Number/Type Pfds:* Various USCG Type I, V and immersion suits
10. *Ring Buoys:* (2) 30", no name, reflective tape or water activated light (see F&R)
11. *Epirb:* Yes
12. *Flares:* Yes
13. *Life Raft:* Yes
14. *Horn:* Yes
15. *Bell:* Yes
16. *Navigation Lights:* (3) masthead, (1) anchor, (2) yellow towing, (1) stern, red and green side
17. *Navigation Lights Tested:* Yes
18. *General Alarm:* Yes
19. *Oil Discharge Placard:* Yes
20. *Garbage Discharge Placard:* Yes
21. *Carbon Monoxide Alarm:* None (see Surveyor's Notes)
22. *First Aid Kit:* Yes

Portable Fire Extinguishers:

TYPE	SIZE	LOCATION	INSPECTION
Wet Chemical	B-II	Galley	12/2007
Dry Chemical	B-II	Engine room flat	12/2007
Dry Chemical	B-II	Forward stateroom	12/2007
Dry Chemical	B-V	Engine room	12/2007
C02	B-II	Engine room	12/2007
Dry Chemical	B-II	Pilothouse	12/2007
Halon	B-I	Pilothouse	12/2007

Fire and Safety Comments:

National Fire Protection Association (NFPA) 302 standards require that this vessel carry a minimum of (5) B-II and (1) B-I size portable extinguishers. Additionally 46CFR part 27 requires that the vessel carry either a fixed fire extinguishing system or a B-V semi-portable extinguisher. The current fire extinguishers meet these minimum requirements. However, we suggest that the vessel owner consider installation of an engineered fixed system to protect the engine room.

NAVIGATION/ELECTRONIC EQUIPMENT

Pilothouse:

Radar: (1) Furuno FAR-2117 ARPA 96 mile flat screen radar with a 6' open ray scanner
(1) Furuno 1942 Mark-2 backup radar

Depth Sounder: (1) Furuno LS-4100 Echo Sounder Depth Sounder»

VHF Radios: (2) Standard Horizon Matrix GX300S VHF radios

SSB Radio: (1) ICOM IC-M700PRO Single Side Band Radio

GPS: Furuno GP-32 GPS/WAAS Navigator
(See Ship's Computer)

Compass: Furuno Satellite Compass
Speery Mark 27 Gyrocompass

Ship's Computer Pentium 4 2.4 GHz With a 20" Samsung Sigmaster 932 flat screen monitor permanently mounted as a navigation instrument and loaded with chart software consisting of Novatek Visual Navigation Suite and Novatek Passport Deluxe

Other: Furuno FA-150 Universal AIS
Simrad AP50 Autopilot, Serial N° 0575/05
Furuno Fax 207 Weather Facsimile Receiver
Speery steering station
Jenson MCD512 CD AM/FM Stereo Receiver
Furuno FA-150 Universal AIS
Weems & Plath Ship's Clock
Weems & Plath barometer

Upper Pilothouse:

(2) Standard Horizon Matrix GX 3000 S VHF Radio Telephone

Winch Control Station:

(2) Standard Horizon Quest X GX1500S VHF Radio Telephone

(1) Standard Horizon VLH 3000 Hailer

DECK/SPECIAL EQUIPMENT

The subject towing winch is an Almon-Johnson Ltd., Series 224 Towing Machine. The winch was purchased from Everett Engineering (Everett Engineering, Inc., 1420 West Marine View Drive, Everett, Washington 98201- (425) 259-3117). The original stock winch was equipped with a drum, pawl, level wind, planetary drive gears with a band brake clutch and an 18" warping head off the starboard side. Everett Engineering customized the stock winch as with the following features:

- Moved level wind drive to outside to allow addition of new band brake.
- Installed new 6" wide stainless steel band brake for holding.
- Modified level wind for "Canadian Link" to allow winding of chain surge gear onto drum.
- Replaced original clutch brake band with stainless steel band.
- Inspected gears and repaired where necessary.
- Welded on a flange to the drum to increase wire capacity to 3200' x 2" wire rope.



- Installed pennant drum, which can carry an additional 1100' x 2" wire rope for an under rider.
- Installed disc brake on the pennant drum with 22000 lb. holding power.

- Installed a Hydrostar MR-375, low speed, high torque, radial piston hydraulic motor rated at 13,740 ft-lbs of torque / 165 HP continuous output.
- Line pull of the main drum is reportedly 166,000 Lbs. Brake holding power is estimated at 300,000 Lbs.
- Blasted and recoated the entire winch assembly.

The main drum is equipped with 2600' of wire rope said to be 6x26 IWRC XIPS, with a spelter set D-socket. The pennant drum is equipped with 600' of wire rope said to be 6x26 IWRC XIPS, with a spelter set D-socket on each end.



The hydraulic power is supplied by a Detroit Diesel 6-71N diesel engine located in the vessel's engine room. The Vickers vane pump hydraulic pump was found driven off of the front of the engine, which also was used to drive a fire pump.

The vessel is equipped with an 8 ton hydraulic boom pitman crane with 50' of reach located on the second deck aft to port.

Located on the foredeck is a hydraulically powered head winch intended to be equipped with a length of plasma line for ship docking.



FINDINGS AND RECOMMENDATIONS

1. The ring buoys were not equipped with water lights, reflective tape and the vessel's name. Recommendation: Equip as above.
2. No guard over the hydraulic pump coupling off of the fire pump engine.

SURVEYORS NOTES

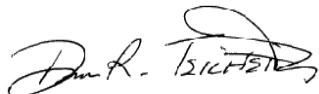
- A. Carbon Monoxide (CO) is an odorless gas produced during the burning of hydrocarbons. Vessels equipped with gasoline generators or propulsion engines and enclosed accommodation spaces are required by American Boat and Yacht Council (ABYC) A-24.7.1 to be equipped with a CO detection system. Vessels equipped with solid fuel or LPG appliances, or diesel generators or propulsion engines, are recommended to be equipped with a CO detection system.
- B. With the exception of the deficiencies noted above, this vessel appeared to be in satisfactory condition for operation as a coastal towing vessel.

This examination has been conducted without making removals, or opening up to expose areas or components ordinarily concealed, or testing for tightness, or testing and/or running machinery or equipment, and does not, therefore, address any damages and/or deficiencies which might have been revealed if such procedures had been executed.

No incline experiment, stability studies or stability analysis was performed in conjunction with this condition and valuation survey. This report and the attending surveyor and this office express no opinion relative to the stability of this vessel. **FURTHER, THIS LIMITED REPORT IS ISSUED IN ACCORDANCE WITH THE TERMS AND CONDITIONS ATTACHED AS ENCLOSURE #1.** Acceptance of this report or its use for any purpose shall serve as acknowledgment of and agreement with these terms and conditions.

The undersigned surveyor hereby certifies that, to the best of their knowledge and belief, the statements of fact contained in this report are true and correct, that the undersigned surveyor is competent to complete this report, and that this report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice of the Appraisal Foundation. Further, the undersigned surveyor has acted in an independent capacity, and the assignment is not based on a requested minimum valuation, a specific valuation, or the approval of any loan.

This report is issued without prejudice to any parties who may be concerned.



TEICHEIRA MARITIME SURVEYORS, LLC
Dana R. Teicheira
NAMS Certified Marine Surveyor

August 21, 2008
Effective Date