



Quay Marine Associates Inc.

Condition Survey

MV "CARUSO"



Quay Marine Associates Inc.

1459 Hollis Street
Halifax, Nova Scotia
Canada B3J 1V1

Document Ref: MV "CARUSO"

Rev.	Author	Approved	Notes	Date
1.0	Ja,ks		Final	18-03-03

"IN ACCEPTING THIS REPORT OR CERTIFICATE IT IS AGREED THAT THE EXTENT OF THE OBLIGATION OF THIS COMPANY WITH RESPECT OF THIS COMPANY WITH RESPECT THERETO IS LIMITED TO FURNISHING A SURVEYOR BELIEVED TO BE COMPETENT, AND IN THE MAKING OF THIS REPORT OR CERTIFICATE THE SURVEYOR IS ACTING ON BEHALF OF THE PERSON REQUESTING THE SAME AND NO LIABILITY SHALL ATTACH TO THIS COMPANY FOR THE ACCURACY THEREOF."



MV "CARUSO"
Condition Survey
At Dartmouth, Nova Scotia
18th March 2003

This is to Certify that the undersigned surveyors did, at the request of Caruso Development Inc., New York, New York, USA, and on behalf of Interested Parties, has on the 18th March 2003 attended onboard the subject vessel as she lay alongside at Karlsens Wharf, Halifax, Nova Scotia, Canada for the purpose of carrying out a vessel condition survey in order to determine the present condition of the vessel and fittings.

Vessel Particulars

Name:	"CARUSO" ex. CCGS Tupper
Port of Registry:	Unknown
Flag:	Unknown
GRT:	1,357.66
NRT:	418.76
Length:	62.25 m
Breadth:	12.80 m
Depth:	4.23 m
Type:	Steel Ice Strengthened Medium Navaid's Tender
Machinery:	Diesel Electric 2 x Fairbanks Morse 38D8 1/8, @1141 kW each 2 x 1,115 kW Westinghouse Propulsion Motors
Built:	1959, Marine Industries, Sorel, Quebec



Limitations of the Survey

1. The condition of the underwater hull of the vessel was not included in the scope of this survey.
2. The vessel was viewed afloat and examination of the shell plating was limited to dockside viewing of areas above the waterline.
3. No machinery or navigational equipment was observed in running condition.
4. No ceilings, claddings or sheathings were removed for examination of underlying structure.
5. Details are as supplied and are presented without warranty as to accuracy.
6. No Ultrasonic examination or other NDT inspection was carried out on the Hull, fittings or pipe work within the scope of the examination carried out.
7. No tanks were open for internal examination.
8. The specifications and particulars as detailed in this Report of Survey have been obtained from the vessel's documentation and are given here without warranty as a guide only.
9. Comments based on conditions observed and documents presented.

Survey

At the time of the survey the vessel lay safely starboard side to alongside Karlsen's Wharf, Halifax, Nova Scotia.

The vessels' lines were secured to strong points along the wharf.

At the time of the survey the vessel was found to be trimmed by the stern and on an even keel.

Access to the vessel was by way gangway between the pier and the well deck of the vessel.

Hull

The observed areas of the hull appear sound with minor indentations and rippling. The coating in way of the waterline is in poor condition with some areas of rust. No gross deformities of the hull were noted

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Forecastle Deck

The forecastle deck and bulwarks were found to be in generally sound condition, the bollards appear to be sound and the fairleads undamaged.

The deck coating is approximately 85% broken down with areas of rust and scale, the bulwark coating is flaking in some areas.

The anchor windlass was exposed brake drum was noted to be somewhat corroded, anchor chains appear sound. The small wave break ahead of the anchor windlass appears to be sound.

Access ladders and aft forecastle deck railings appear to be sound, the coatings were found part broken down.

The anchor windlass has been trailed and found to be fully operational.

Wheelhouse Top

The wheelhouse top equipment including searchlight, starboard gyro repeater, engine order telegraph, binnacle and flood lights were found intact and in place.

The Boom lifting frame appears to be sound as do the back stays connected to the wheelhouse top.

Wheelhouse top vents, antenna bases and bulwarks appear to be intact.

The deck coating is approximately 50% broken down with some areas of scaling, the underlying deck structure appears sound.

Bridge Deck

Wheelhouse

The wheelhouse was found to be dry and clean, some electronic equipment has been removed as evidenced by terminated wiring. The bridge windows were found intact and the sliding windows operational.

The deck was dry and there were no signs of water leakage from the windows, bulkheads or deck head.

Electric heaters in the wheelhouse were found to be operational.

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Navigation and Radio

The following Navigation aids and Radio equipment were noted to be fitted in the Wheelhouse and Chart Room:

<u>Equipment</u>	<u>Manufacturer</u>	<u>Type</u>
Radar	Sperry Marine	Rascar 3400M
VHF Radio	Sailor	C403
Watch Receiver	Intech	Marine 1511
Fax machine	Ricoh	Fax 65
HF Radio	Motorola	D80MLA1X41AK
Gyro Repeater	Sperry Marine	
Engine order telegraph	Donkin & Co.	
Depth Sounder, Video	Furuno	FCV-551
Depth Sounder, mechanical	ELAC	
Gyro Power system Alarm	Sperry Marine	1887020
Navigation Light Panel	Island Control Ltd.	
Navtex Printer	Lo-Kata	Navtex 2
Direction Finder	Taiyo	DS2TYAE-13
Fire Control Station	Miratone	Series 8000



Photograph 1: General view looking to port across the wheelhouse.

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Aft of the wheelhouse on the port side is the radio room which contains some of the radio equipment and the main telephone switchboard, the space appears to be dry and clean.

Aft of the radio room in a separate compartment accessible from the deck is the Emergency Generator Room containing the emergency switchboard the emergency generator and the emergency generator fuel tank. The space was clean, well lit and heated. The emergency generator is fully operational and has been tested under load a number of times in the past three months.

Cradles for five 20 person are fitted on the Bridge Deck, 3 to port and 2 to starboard, all life rafts were ashore for servicing at a certified facility at the time of the survey.



Photograph 2: General view looking at the Emergency Generator.

Continuing aft on the Bridge Deck is an open area which is understood to have been a lifeboat station. The area now contains a set of boat chocks, the deck coating in the area is severely broken down with large areas of rust and scale, the under deck appears sound.

The Helicopter Hanger was found to be in the fully extended position with the forward access doors secured and the hanger door in the closed position. All of the equipment, fittings and deck in the area were found in tact. The condition of the helicopter fire fighting equipment could not be determined and was noted to require servicing. This equipment is of high quality and is not considered necessary for the vessel operation, overhaul facilities are available locally.

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Aft of the wheelhouse on the starboard side is the chart room, the space was found dry and without any accumulation of debris or signs of water leakage.

Aft is the Captains Cabin which was found dry and without signs of water leakage. Interior spaces were found dry and warm without signs of mildew or rot.

Aft of the Captain's Cabin on the open deck is a work boat under davits and resting in chocks.

The condition of the Work Boat hull nor engine could be determined, however, given the length of time that the vessel has been laid up it may be concluded that the engine will require an overhaul prior to being put in service.

The coating on the deck area surrounding the Helicopter Hanger was found to be in poor condition with some areas of scaling. The raised grating in way of the helicopter landing area appeared to be sound and intact.

The helicopter deck is surrounded by lowerable stanchions on which net is attached, some of the net is in poor condition and some of the stanchion securing pins was missing.

Boat Deck

The Boat Deck contains the main winch control station amidships forward of the Officers' Dining Room and Lounge, the forward windows in tact and winch levers in place.

Deck bulwarks were in place and in tact, the deck coating of the exterior decks was found to be 60% or more broken down with some areas of rust and scale.

Mooring bollards were in place and appear sound, the deck machinery is fully operational.

All of the cabin windows were found to be intact and in place. Most cabins contain furnishings including bunk mattresses, desk and chairs, there were no signs of water leakage into the cabins from either windows or deck heads.

Deck coverings appear to be in good condition.

Washrooms appear to be clean with no signs of water leakage

Temporary electric wiring leads were run to thermostatically controlled electric heaters located at various places around the Boat Deck accommodations. All temporary wiring appears sound.

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The accommodations were found to be dry and odour free.



Photograph 3: General view looking aft from the Officer's Dining Room.

Upper Deck

Forward on the Upper Deck accessed by a passage amidships from the well deck is the Forward Store Room found to contain an assortment of small tools and equipment on wood and steel shelves.

The chain lockers are accessed from this space.

The space was found to be well lit and dry, the vessels' side and deck heads were covered with insulation which appeared in tact. The type and nature of the insulation in place was not determined nor was any documentation on board indicating the type and nature of the insulation.

The condition of the steel covered by the insulation was not determined within the scope of the survey carried out.

Aft of the forward stores and accessible by way of an inward opening door on the starboard side is the Bosun's Store found to contain miscellaneous vessels' equipment including block and tackle and work bench.

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The ship side and deck head were covered with insulation, the type and nature of which was undetermined. The condition of the steel beneath the insulation was not determined within the scope of the survey carried out.

Aft of the forward stores and accessible by way of an inward opening door on the port side is the Lamp and Paint Room, a small amount of paint in sealed cans, some used paint rollers, paint trays were noted to be in the space, an explosion proof electric heater was fitted in the space but was not operating at the time of the survey.

The weather tight door giving access to the Forward Store Rooms from the Well Deck was found to be in good condition.

Well Deck and Hatch Cover

The Well Deck (Buoy working Deck) located between frames 81 and 115, between accommodations and the Forecastle Deck is sheathed with wood planking over much of its' length, the planking is somewhat deteriorated and damp.

The condition of the steel deck below the wood sheathing was not determined within the scope of the Survey carried out, however, given the damp state of the wood sheathing it is recommended that prior to the vessel being returned to service, thickness measurements of the underlying deck plate be taken.

Foundations for the Well Deck bollards and machinery appear sound.

Bulwarks and railings on the port and starboard sides of the Well Deck appear stout and sound.

The deck mounted vents appear sound.

The hatch comings appear sound, the hatch tarpaulins are in poor condition and are to be replaced.

The Hatch Boards, viewed from below appear sound with a sufficient quantity of new spare hatch boards found in the hold.

Hold

The hold was found to be dry with a small accumulation of water in the aft port and starboard bilge wells. Various stores including spare hatch boards, quantities of spare bouy winch wire (like new), buoy stones and mooring ropes were found in the hold.

The under deck framing is of very heavy construction and appeared without deformation, side shell framing and plating which was visible appears to be without deformation,

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frame spacing is close with many deep frames as expected on an ice strengthened vessel.

Galley and Store Rooms

Forward on the Upper Deck port side between frames 65 and 80 is a large well equipped galley off which on the inboard side are freezer and cold rooms. The cold room and freezer were open, empty and aired out.

The galley and equipment appear to be in good condition with no signs of water leakage or damage. Stoves, ovens, refrigeration and ventilation equipment are all operational.

The deck coating appears to be in good condition.

Galley port lights were found to be intact and in place.

Aft of the Galley on the starboard side is a dry store room fitted with metal shelving.

Crew Dining Room and Recreation Room.

On the starboard side of the Upper Deck forward are the crew Dining Room and Recreation Room both spaces have had some fittings removed but major fixed fittings remain, the space was lit with no signs of water leakage.

Crew Cabins and Washrooms

All of the crew cabins on the Upper Deck were found to be sound with port lights intact. Some of the steam heaters in the cabins were found to be blanked off.

Washrooms were found intact and without signs of water leakage.

Deck coverings were found to be in good condition.

Temporary thermostatically controlled electric heaters were found at various locations around the accommodations temporary wiring found to be in good condition. It is understood that prior to the boiler being placed back in operation that the vessel interior had been heated at all times.

The Laundry Room and Store Room aft on the port side of the Upper Deck were found to be sound.

Steering Gear Compartment

Aft most on the Upper Deck between frames 5 and -8 is the Steering Gear compartment.

The space was found to be clean and dry. All port lights were in place and intact, ship

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side insulation and deck head insulation appeared sound with no signs of water leakage.

The steering gear appears sound and for the size of vessel is heavily built.

Aft capstan hydraulic power packs were found in the space.

Engine Room

The Engine Room, located between frames 54 and 86.5, contains the main propulsion generators, the ship service generators and various auxiliary machinery.

The engine room was found to be clean and well lit and with only a small amount of oily water accumulated in the bilge. There were no visible signs of water leakage from any of the pipe work.

Machinery details as follows:

	Port Main Engine	Starboard Main Engine
Make:	Fairbanks Morse	Fairbanks Morse
Model:	38D8 1/8	38D8 1/8
Output:	1,640 HP @ 860 RPM	1,640 HP @ 860 RPM
Hours:	5,472 (since last overhaul)	503 (since last overhaul)
	Port Propulsion Motor	Starboard Propulsion Motor
Make:	Westinghouse DC Motor	Westinghouse DC Motor
Output:	1,115 kW @ 850 RPM	1,115 kW @ 850 RPM

Both port and starboard main engines have been inspected by factory trained engineers with full inspection and overhaul reports available.

The starboard main engine was found to be in excellent condition with factory recommended modifications carried out to the tappet housings and all fuel injectors overhauled, calibrated and tested.

The port main engine was found to have two cracked liners, these were replaced with new factory supplied liners. As the replacement of the liners necessitated the removal of the upper crankshaft a full inspection of the upper drive train was possible, no anomalies being noted. Factory modifications to the tappet housings were made and all fuel injectors overhauled

The main engines appear to be sound with no signs of major oil or fuel leakage.



Ship Service Generators

Port Ship Service Engine		Starboard Ship Service Engine	
Make:	Caterpillar		Caterpillar
Model:	D 353		D 353
Port Ship Service Generator		Starboard Ship Service Generator	
Make:	Tamper DC Generator		Tamper DC Generator
Model:	6HD425-1B6		6HD425-1B6
Output:	240 kW, 1,090 A, 220 VDC		240 kW, 1,090 A, 220 VDC

The ship service generator engines appear to be sound with no signs of major oil or fuel leakage. Prior to putting the generators in service it was found necessary to replace gaskets in the fuel pumps, oil and filters were changed. Oil samples taken from both generators returned normal results. Both ship service generators have been operated and tested under load without difficulty.

Auxiliary equipment appears to be sound and intact. Pumps piping and valves were inspected and where necessary have been overhauled. All valves in the salt water system that were possible to overhaul with the vessel afloat have been opened up and overhauled, a full overhaul report is available onboard.

Temporary thermostatically controlled heaters were placed at various locations in the engine room, the heaters were noted to be operational and the space free of condensation.

Control Room

Located between the Engine Room and the Propulsion Motor Room at frames 46 to 54 is the Control Room containing the Main Switch Board and the Propulsion Control Board.

The space was found to be clean and well lit, the switch boards were found intact, the forward and aft facing windows were found in tact, all exposed wiring appeared to be in good condition.



Photograph 4: View looking aft in the Control Room between the switch boards.

Propulsion Motor Room

Aft of the Engine Room between frames 30 and 54 is the Propulsion Motor Room containing the port and starboard DC Propulsion Motors and various auxiliary machinery including the heating boiler.

The heating boiler, installed approximately two years before the vessel was decommissioned by the Canadian Coast Guard was in operation and has operated without incident from November 2002 to the present.

It was noted that there was a small amount of water in the propulsion motor bilges but no signs of leakage at any of the pipe work.

Prior to work commencing in November 2002, temporary thermostatically controlled heaters had been placed at various locations around the propulsion motor room, they were operational and the space free of condensation.



Photograph 5: General view looking aft to starboard in the Propulsion Motor Room.

Aft of the Propulsion Motor Room there are aft machinery flat, the machine shop and the electrical workshop. The spaces were found to be free of water leakage and appear sound.

The electric propulsion motors and their associated systems have been inspected and found in good condition, all seawater cooling system valves and pumps have been opened up inspected, cleaned and proven operational.

Photographs

Additional photographs taken at the time of the survey are available on request.



Comments

The MV "CARUSO", an ice strengthened navais tender, in the opinion of the Undersigned, is found to be in fair and reasonable condition considering the vessel's age and service in which it has been employed and maintained since lay-up.

This survey report is a factual statement of the examination carried out, with opinions given in good faith of the condition of the vessel, within the limitations of the survey, as seen at the time of survey. While the Company and its Surveyor have used their best endeavours to ensure that the functions of survey have been properly executed it is understood that no responsibility will be accepted for any inaccuracy, error of judgement, omission, or default, arising from this survey and/or report.

P. John Attersley

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