

Report of Survey for Repairs, &c., of Engines and Boilers.

(Received at London Office)

Date of writing Report 5th March, 1948 When handed in at Local Office 5th March, 1948 Port of Vancouver, B. C.
Survey held at Vancouver, B. C. Date, First Survey 4 Feb. 1948 Last Survey 3rd March, 1948
(No. of Visits 14)

on the Machinery of the ~~Wood, Iron or Steel~~ Single Screw Steamer "HARMAC CROFTON"
Year. Month.
Gross 7161 Vessel built at Vancouver, B.C. By whom Burrard Dry Dock Co. Ld. When 1944 2
Net 4307 Engines made at Montreal By whom Canadian Allis-Chalmers Ld. When 1944
Main Boilers 2 WT Boilers, when made (Main) 1944 (Donkey)
Donkey Boilers 250 lb Owners Canadian Transport Co. Ld. Owners' Address
Managers Port Vancouver, B.C. Voyage U. K.
If Surveyed Afloat or in Dry Dock Both Pacific Dry Dock
(State name of Dock.)

Report No. Port Docking, L.M.C. & Repairs

Particulars of Examination and Repairs (if any) & Repairs

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER * for Special Survey Date of last Survey and of Periodical Surveys.	Year assigned now expired.	Machinery and Boiler Surveys (Including date of N.B., if any)
*100 A1 with		*LMC 2,44
freeboard 2,47		BS 2,47
		CL 2,47
		WTB
Fitted for oil fuel		2,44
F.P. above 150°		

Special Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and repairs being detailed in the body of the report, should be briefly summarised at the end of the report. State also the name and initials of any letters respecting this case.

Where cases where the Surveyor has not made a special damage report he is required to state whether he has referred his services for this purpose, and why they were declined.

Has damage report made by anyone else? If so, by whom? Yes

Has the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Yes

Was not done, state for what reasons? W.T. Type

What parts of the Boilers could not be thus thoroughly examined? Both boilers tested hydraulically to 330 lbs./sq.in.

What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? Both boilers tested hydraulically to 330 lbs./sq.in.

Latest date of internal examination of each boiler Port 4-2-48 Starboard 11-2-48 Present condition of funnel(s) Eff. Main valve 250 lbs./sq.in. Superheat 230 lbs./sq.in.

Has the Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam?

Has the Surveyor examine the Safety Valves of Donkey Boiler? To what pressure were they afterwards adjusted under steam?

Has the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes, and of the Donkey Boilers?

Has the Surveyor examine the drain plugs of the Main Boilers? None, and of the Donkey Boilers?

Has the Surveyor examine all the mountings of the Main Boilers? Yes, and of the Donkey Boilers?

Has the screw shaft now been drawn and examined? No Is it fitted with continuous liner? Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?

Has the shaft now fitted been previously used? Has it a continuous liner? Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?

Date of examination of Screw Shaft State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft 104"

Engine parts, when referred to by numbers, should be counted from forward. Is electric light and/or power fitted? Light only

Has the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes

Is the survey complete, state what arrangements have been made for its completion and what remains to be done. Complete.

DONE:- Vessel placed in drydock, propeller, sea connections and underwater fastenings examined. Sea valves and discharge valves opened up, examined and found or placed in good order. Propeller backed off and screwshaft taper in way examined and as far as now seen appeared to be in efficient condition. Wear down as above.

Following parts opened up and examined for L.M.C. and found or placed in good order:- Main Engines:- All cylinders, covers, pistons, valves and valve chambers. All bottom end pins and bearings. All crankshaft main journals and bearings (top halves). Thrust shaft, bearings and block complete. (P.T.O.)

General Observations, Opinion, and Recommendation:- State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 9,11, B.G.M.S. 9,11, *L.M.C. 9,11, or *LMC 140 lb., F.D., &c.) CS 3,34. All the requirements for L.M.C. having now been complied with the machinery and boilers of vessel are in safe working condition and, in my opinion, are eligible to remain as classed with the record of *L.M.C. 3,48.

Fee (per Section 29) LMC \$157.00 BS 82.50
Damage or Repair Fee (if any) \$ 30.00
(per Section 29.) Electrical \$ 50.00
Seaboard Governor \$ 15.00
Expenses (if chargeable) \$ 9.00
Late fee \$ 10.00

Fees applied for 5 March 1948
Received by me, [Signature]

[Signature] 2020
Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation

Insert Character of Ship and Machinery precisely as in the Register Book

Is a Certificate required? If so, to be sent to

Main Engines:- (Cont'd)

Attached air, bilge and sanitary pumps.
Intermediate shafting and all journals and bearings.
Main and auxiliary condensers opened up and satisfactorily tested.

Auxiliaries:- Main circulating pump and engine.

Both feed pumps, fire and bilge pump.
Ballast and general service pumps.
Auxiliary air and circulating pump.
Fan engine.

3 electric generator engines all opened up and examined in their entirety.

PUMPING ARRANGEMENTS:- All valves, cocks, pipes, strainers of the pumping arrangements examined and tested under working conditions and found or placed in good order.

ELECTRICAL INSTALLATION (for lighting only):- Generators, cables, switchboard and connections and fittings examined and megger tested as per Rule requirements also examined under working conditions and found or placed in good order.

BOILER SURVEY (2 W.T. Type):- Both main boilers examined internally and externally with their safety valves, doors and mountings and their safety valves adjusted under steam to the working pressure.

Both boilers hydrostatically tested to 330 lbs. per sq. inch.

2 fuel pumps and 1 transfer pump opened up and examined in their entirety and all valves, tanks, pipes and deck control gear in connection with the oil fuel installation also main and auxiliary steam and feed pipes and oil discharge pipes between pumps and frames examined and tested under working conditions.

Fire extinguishing installation and controls examined and found in good order.

Spare gear examined and found to be in accordance with Rule requirements.

REPAIRS (Wear & Tear) NOW DONE:-

Main Engines:- Top half of No.4 main bearing remetaled.
Both top halves of I.P. top end bearings renewed.

Auxiliaries:- Ballast pump and general service pumps - suction and delivery chests disconnected, machined and all new suction and delivery valves and seats fitted.

Port boiler 1 - 4" tube renewed.

Stbd. " 1 - 4" " "

Main and auxiliary machinery examined under working conditions.

Sundry other minor repairs effected.

SEABOARD ANTICIPATING GOVERNOR fitted on starboard side between frames 11 and 12, 2'-6" below centre line of shaft. Opening 1" dia. cut in shell plate, welded doubler pad fitted and gate valve efficiently secured to same with studs.

Installation examined under working conditions.

Interim Certificate issued - Copy attached.



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