

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office. **27 OCT 1945**

Sept. 8, 1945. 45. Sept. 11, 1945. 45
 Date of Report. Nov. 15, 1944. When handed in at Local Office. Oct. 13, 1944. Port of Montreal, Que. & Quebec, Que. 1945.
 Date, First Survey June 8, 1944. Last Survey Sept. 23, 1944.
 Survey held at Montreal, Que. & Lauzon, Que. Date, First Survey June 8, 1944. Last Survey Sept. 23, 1944.
 Leg. Book on the TWIN SCREW TRANSPORT FERRY HMS-LST(3) 3512
 Tons { Gross 4290.74
 Net 2430.45
 Built at LAUZON, P.Q. By whom built DAVIE SHIPBUILDING & REPAIRING CO. LTD. Yard No. 567 When built 1945
 Engines made at MONTREAL, QUE. By whom made CANADIAN PACIFIC RAILWAY Engine No. 7-ET-16 When made 1944
 COMPANY - ANGUS SHOPS
 Boilers made at TORONTO, ONT. By whom made JOHN INGLIS LTD. Boiler No. P-4671 When made 1944
 S-4672
 Registered Horse Power Owners BRITISH ADMIRALTY. Port belonging to
 Nom. Horse Power as per Rule 743 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Naval Service

ENGINES, &c.—Description of Engines Four Cylinder Triple Expansion Revs. per minute 185
 Dia. of Cylinder 18 1/2" x 31" x 38 1/2" x 38 1/2" Length of Stroke 30" No. of Cylinders 4 each Engine No. of Cranks 4 each Engine
 Crank shaft, dia. of journals as per Rule 10.0275" Mid. length breadth — Thickness parallel to axis 6.5"
 as fitted 10.5" Crank pin dia. 10.5" Crank webs Mid. length thickness — Thickness around eye-hole 4.875"
 Intermediate Shafts, diameter as per Rule 9.55" Thrust shaft, diameter at collars as per Rule 10.0275"
 as fitted 10.50" as fitted 10.50"
 Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 10.76"
 as fitted — as fitted 10.75" Is the { screw } shaft fitted with a continuous liner { No
 Bronze Liners, thickness in way of bushes as per Rule — Thickness between bushes as per Rule — Is the after end of the liner made watertight in the
 propeller boss. — If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner.
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive.
 If two liners are fitted, is the shaft lapped or protected between the liners. — Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft. Yes If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 66"
 Propeller, dia 10'-0" Pitch 10'-2" No. of Blades 3 Material Bronze whether Moveable NO Total Developed Surface 35 sq. ft.
 Feed Pumps worked from the Main Engines, No. None Diameter — Stroke — Can one be overhauled while the other is at work —
 Bilge Pumps worked from the Main Engines, No. None Diameter — Stroke — Can one be overhauled while the other is at work —
 Feed (No. and size Four 8" X 10 1/2" X 22" Pumps connected to the { No. and size Four 10" X 8" X 10" Duplex
 Pumps (How driven Steam, Weirs Main Bilge Line { How driven Steam, Two 30 Ton Ejectors in BRs.
 Ballast Pumps, No. and size Two 14" X 12" X 12" Duplex Lubricating Oil Pumps, including Spare Pump, No. and size —
 Are two independent means arranged for circulating water through the Oil Cooler. — Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room Two 2 1/2" Direct, Four 3" Main, Four 2 1/2" Hose counts in ER; Four 3" main, Two 2 1/2" Hose
 In Pump Room Forward, three 3" In Holds, all spaces outside ER, BR & PR 3" main & 2 1/2" main for cof-
 In Pump Room, Aft. Three 3", One 5", One 2 1/2" Hose connection. perdamas.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size Two 9" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size Two 2 1/2" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valves
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Overboard Discharges above or below the deep water line Below
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off valves fitted with a spigot and zinc covering plate Yes
 What Pipes pass through the bunkers None How are they protected —
 What pipes pass through the deep tanks None Have they been tested as per Rule —
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one
 compartment to another. Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight Hatch worked on Lower Deck

MAIN BOILERS, &c.— (Letter for record 8) Total Heating Surface of Boilers 12512 sq. ft.
 Which Boilers are fitted with Forced Draft BOTH Which Boilers are fitted with Superheaters None
 No. and Description of Boilers Two water Tube Yarrow Type Working Pressure 225 Lbs./Sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded?
 Can the donkey boiler be used for domestic purposes only. Approved Approved
 PLANS. Are approved plans forwarded herewith for Shafting London Main Boilers London Auxiliary Boilers Donkey Boilers
 (If not state date of approval)
 Superheaters General Pumping Arrangements Oil fuel Burning Piping Arrangements

SPARE GEAR.
 Has the spare gear required by the Rules been supplied YES
 State the principal additional spare gear supplied AS PER BRITISH ADMIRALTY REQUIREMENTS.

The foregoing is a correct description
 Canadian Pacific Railway Company
 Per J. J. Macdonald
 Asst. Works Manager, Munitions

Manufacturer.



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Dates of Survey while building
During progress of work in shops - Various from June 8, 1944 to September 23, 1944 (Constant attendance)
During erection on board vessel - From 15th January 1945 to 6th September 1945 [Constant attendance]
Total No. of visits Constant attendance

Dates of Examination of principal parts - Cylinders P.26.7.44 S.26.7.44 Pistons P.11.9.44 S.14.9.44 Piston Rods P.12.9.44 S.12.9.44 Connecting rods P.12.9.44 S.12.9.44 Crank shaft P.18.9.44 S.23.9.44 Thrust shaft P.7.7.44 S.9.8.44 Intermediate shafts Port 14-9-44 Star 14-9-44 Tube shaft - - - - - Screw shaft P&S.14-9-44 Propeller Port 10-4-45, Star 10-4-45 Stern tube 8-11-17, Nov. 5 Dec. 44 Engine and boiler seatings 26-3-45 Engines holding down bolts P&S. 2-6-45 Completion of fitting sea connections 21-4-45 Completion of pumping arrangements 26-7-45 Boilers fixed 16-6-45 Engines tried under steam 27-7-45 Main boiler safety valves adjusted 25-7-45 Thickness of adjusting washers Ps. 412" & 420": Ss. .517" & .546" Crank shaft material O.H. Steel Lloyd's Nos. P.2113 MD.18.9.44 Identification Mark S.2114 MD.23.9.44 Thrust shaft material O.H. Steel Lloyd's Nos. P.2205 MD.23.9.44 Identification Mark S.2304 MD.23.9.44 Intermediate shafts, material O.H. Steel Identification Marks Port. 9177, 9.44 Starb. 9156 Tube shaft, material 5958, 9251 Identification Mark - - - - - Screw shaft, material O.H. Steel Identification Mark P.2151 S.2142 Steam Pipes, material O.H. Steel Test pressure 675 Lbs. Date of Test 29-6-45 Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes Have the requirements of the Rules for the use of oil as fuel been complied with Yes Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with - - - - - If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with - - - - - Is this machinery duplicate of a previous case Yes If so, state name of vessel CN 948

General Remarks (State quality of workmanship, opinions as to class, &c.) These ENGINES have been constructed under Special Survey and in accordance with the Approved Plans and Instructions forwarded by the Admiralty and approved by the Royal Canadian Navy. The materials and workmanship are, in my opinion, satisfactory. These ENGINES are fitted with welded steel bed plates, constructed in accordance with the Approved Plans. The materials used in the construction of these ENGINES have been tested by the Surveyors to this Society and the British Corporation, and finally examined by the undersigned and found satisfactory. Forging reports attached herewith. These ENGINES have now been shipped to for installation and official trials. It is recommended for the favourable consideration of the Committee that the record of L.M.C. (with date) be made in the Register Book, in the case of this Vessel subject to satisfactory installation and sea trials. The MACHINERY & BOILERS for this Vessel have now been properly fitted on board and on completion tried under full working conditions and found satisfactory. The Safety Valves have been adjusted under steam & tested for accumulation & it is recommended for the favourable consideration of the Committee that the record of L.M.C. 8-45 & the notation of TS, OQ 8-45 & "Fitted for Oil Fuel F.P. above 150°F" be made in the case of this Vessel.

The amount of Entry Fee ... \$ 30.00 : When applied for, Special ... \$ 610.00 : 22nd Sept. 1945 Donkey Boiler Fee ... \$: When received, Travelling Expenses (if any) \$ Included in Fuel Rpt. 19 Committee's Minute Fri. 9 NOV 1945

Bloomfield & M. Dickson
Engineer Surveyor to Lloyd's Register of Shipping.