

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 14 OCT 1942

Date of writing Report 21-AUGUST 1942 When handed in at Local Office 21-AUGUST 1942 Port of Vancouver B.C.
 No. in Survey held at ESQUIMALT, B.C. Date, First Survey 6-MARCH Last Survey 4-JULY 1942
 Reg. Book. on the STEEL SINGLE SCREW STEAMER "FORT McLEOD" (Number of Visits 48)
 Built at ESQUIMALT B.C. By whom built YARROWS LTD. Yard No. 67 Tons { Gross 7027.10 Net 4260.69
 Engines made at MONTREAL P.Q. By whom made DOMINION ENGRS. WORKS. LD. Engine No. 8 When built 1942
 Boilers made at VANCOUVER, B.C. By whom made VANCOUVER IRON WORKS LTD. Boiler No. 153 When made 1941
 Registered Horse Power 229 Owners MINISTER OF MUNITIONS & SUPPLY OF CANADA Port belonging to -
 Nom. Horse Power as per Rule 504 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES
 Trade for which Vessel is intended GENERAL CARGO

ENGINES, &c.—Description of Engines TRIPLE EXPANSION. SUPERHEAT TO 575°F. Revs. per minute 80
 Dia. of Cylinders 24 1/2 x 37 x 70 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.99 Crank pin dia. 14.25 Crank webs Mid. length breadth 24 1/2 Thickness parallel to axis 9 1/2
 as fitted 14.25 Mid. length thickness - shrunk Thickness around eye-hole 7/8
 Intermediate Shafts, diameter as per Rule 13.33 Thrust shaft, diameter at collars as per Rule 13.99
 as fitted 13.5 as fitted 14.25 Is the screw shaft fitted with a continuous liner YES
 Tube Shafts, diameter as per Rule - Screw Shaft, diameter as per Rule 14.87
 as fitted - as fitted 13.25 Is the screw shaft fitted with a continuous liner YES
 Bronze Liners, thickness in way of bushes as per Rule .75 Thickness between bushes as per Rule .365
 as fitted .78125 as fitted .68 Is the after end of the liner made watertight in the propeller boss YES
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner SOLID
 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 TIGHT FIT
 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 NO
 Propeller, dia. 18.6 Pitch 16.0 No. of Blades 4 Material BRONZE whether Moveable NO Total Developed Surface 117 sq. feet
 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. TWO Diameter 4 1/2 Stroke 26 Can one be overhauled while the other is at work YES
 Feed Pumps { No. and size 2 - 10 x 7 x 24 Pumps connected to the { No. and size (FOUR) - 1 - 10 x 12 x 10 - 1 - 9 x 6 x 10 - 2 - RANS. 4 1/2
 How driven STEAM - WORTHINGTON TYPE Main Bilge Line { How driven DUPLEX STEAM - DUPLEX STEAM - MAIN ENGINE
 Ballast Pumps, No. and size ONE - 10 x 12 x 10 Duplex Lubricating Oil Pumps, including Spare Pump, No. and size NONE
 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 2x RM. 1-3" DIA. P.S. - ENG. RM. 1-3" DIA. P.S. - 1-2" DIA. IN THRUST RECESS
 In Pump Room - In Holds, &c. FOREPEAK 1-4" DIA. N° 1 - 2-3-4-5 HOLDS - 1-3" DIA. PORT & STARBOARD
 IN BATH HOLD. — 1-4" DIA. TO AFTER PEAK - 1-2 1/2" DIA. TO TUNNEL WALL
 Main Water Circulating Pump Direct Bilge Suctions, No. and size ONE - 9" DIA. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ONE - 5" DIA. STARBOARD SIDE 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 & COCKS
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold 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 Cocks fitted with a spigot and brass covering plate YES
 What Pipes pass through the bunkers STEEL AIR PIPES TO N° 4 - DB. TANKS; FORWARD BILGE SUCTIONS How are they protected STEEL STRAPS WELDED ACROSS FRAMES UNDER LIMBER BOARDS
 What pipes pass through the deep tanks N° 7 DB. TANK AIR PIPES Have they been tested as per Rule YES
 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 door NO worked from -

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7140 Sq. Ft.
 Is Forced Draft fitted YES No. and Description of Boilers 3 - SINGLE END MULTITUBULAR. FITTED WITH SUPERHEATERS. Working Pressure 220 LBS. PER SQ. IN.
IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES
IS A DONKEY BOILER FITTED? NO If so, is a report now forwarded? -
 Is the donkey boiler intended to be used for domestic purposes only -
PLANS. Are approved plans forwarded herewith for Shafting APPROVED PLANS IN UNITED KINGDOM Main Boilers - Auxiliary Boilers - Donkey Boilers -
 Superheaters - General Pumping Arrangements ATTACHED (as fitted) 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 LIST FORWARDED WITH VER. RPT. N° 5718 - S.S. "FORT ST. JAMES"

The foregoing is a correct description,

FOR YARROWS LIMITED

John Cameron

Manufacturer.



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Lloyd's Register Foundation

W1188 0155

SEE MONTREAL, P.Q. RPT. N° 5585

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits. 48

1942. MARCH. 6-8-23-26. APRIL. 2-7-10-11-13-14-20-24-29-30. MAY. 5-6-7-10-12-15-20-22-26-30.
JUNE. 4-5-8-9-12-13-15-16-17-18-19-20-22-23-24-25-26-27-29-30. JULY. 1-2-3-4.

Dates of Examination of principal parts—Cylinders Slides Covers
Pistons
Piston Rods RPT. N° 5585
Connecting rods 22-7-41-2-8-41
Crank shaft Thrust shaft 9-7-41 - 23-1-42. Intermediate shafts 31-7-41 - 7-5-41 - 5-9-41
Tube shaft Screw shaft 7-3-41 - 23-2-42 Propeller 18-12-41 - 13-4-42
Stern tube 15-1-42 - 10-4-42. Engine and boiler seatings 23-1-42 - 12-3-42 Engines holding down bolts 12-5-42.
Completion of fitting sea connections 14-4-42.
Completion of pumping arrangements 24-6-42. Boilers fixed 5-6-42. Engines tried under steam 17-6-42 - 29-6-42.
Main boiler safety valves adjusted 24-6-42 - 25-6-42. Thickness of adjusting washers (P.V. 486" 5.115" 5.815" (P.V. 617" 5.115" 5.815" (P.V. 527" 5.115" 5.815")
Crank shaft material O.H. STEEL. Identification Mark H.S. 14-1-42 Thrust shaft material O.H. STEEL Identification Mark H.S. 9-7-41
Intermediate shafts, material O.H. STEEL. Identification Marks 214 WS 10-22-41 5 FB 7-3-41 214 WS 7-31-41 5 FB 29-41
Screw shaft, material O.H. STEEL. Identification Mark H.S. 23-1-42 Test pressure 660 lbs Date of Test 15-5-42
Is an installation fitted for burning oil fuel NO Is the flash point of the oil to be used over 150°F.
Have the requirements of the Rules for the use of oil as fuel been complied with.
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 S.S. "FORT GEORGE" - VCR RPT. N° 5740.

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery of this vessel has been constructed under special survey of the Montreal, P.Q. Surveyor, and installed on board under special survey in accordance with the approved plans, New York letters and otherwise in conformity with the Society's Rules. The materials and workmanship are good and the tests required by the Rules have been satisfactorily carried out. The whole installation has been examined and tested under full working conditions on sea trials and afterwards opened out, examined and found satisfactory. The machinery has also been surveyed during construction and installation on behalf of War-time Merchant Shipping Ltd., to ensure that the terms of the Specifications have been fully complied with and this work has been satisfactorily carried out. The machinery of this vessel is eligible in our opinion to be classed in the Register Book with notation, * L.M.C. 6-42 - Screw Shaft Cdn. 3 S.F. Boilers 220 lbs per sq. inch. F.D.

Montreal fees charged on Mtl. Rpt. No 5585.

The amount of Entry Fee ... £	:	:	When applied for,
Special VCR ...	£	133.00	3.7.1942
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	60.00	✓ 19

S. J. Boomer
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned
TUE 10 NOV 1942
+ dmb. 7-4-2
32, CH,

