

Rpt. 4.

No. 16583

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office
 Date of writing Report 31st May 1928 When handed in at Local Office 31st May 1928 Port of West Hartlepool
 No. in Survey held at Hartlepool Date, First Survey 23rd May Last Survey 14th Dec 1927
 Reg. Book. on the Twin S.S. No 497 "Quebec" Number of Visits 95
 Built at Levis, Quebec By whom built The Davie B. Repg Co. Ltd. Yard No. 497 Tons { Gross 7015.59
 Engines made at Hartlepool By whom made Richardson's Westgarth Engine No. 2669 When built 1927 Net 2481.01
 Boilers made at ditto By whom made " " Boiler No. 2669 when made 1927
 Registered Horse Power Owners Canada Steamship Lines Ltd. Port belonging to Montreal
 Nom. Horse Power as per Rule 790 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which Vessel is intended Passenger & Freight Service between Montreal & Saguenay

ENGINES, &c.—Description of Engines Twin Screw four cylinder triple expansion Revs. per minute 125
 Dia. of Cylinders 24"-38"-44"-44" Length of Stroke 36 No. of Cylinders 8 No. of Cranks 8
 Crank shaft, dia. of journals as per Rule 4.77" Crank pin dia. 12 1/2" Crank webs Mid. length breadth 2 1/8" Thickness parallel to axis 7 1/2"
 as fitted 12" Mid. length thickness 7 1/2" Thickness around eye-hole 6 1/8"
 Intermediate Shafts, diameter as per Rule 11.21" Thrust shaft, diameter at collars as per Rule 11.77"
 as fitted 11 3/8" as fitted 12"
 Tube Shafts, diameter as per Rule 12.65" Screw Shaft, diameter as per Rule 12 3/4" Is the { tube } shaft fitted with a continuous liner { yes }
 as fitted 6.85" as fitted 3/4" Is the { screw } { no }
 Bronze Liners, thickness in way of bushes as per Rule 3/4" Thickness between bushes as per Rule 3/4" Is the after end of the liner made watertight in the
 as fitted 3/4" 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 ✓
 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 fitting
 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 Length of Bearing in Stern Bush next to and supporting propeller 4'6"
 Propeller, dia. 12'0" Pitch 15'6" No. of Blades 4 Material Bronze whether Moveable yes Total Developed Surface 51 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. none Diameter Stroke Can one be overhauled while the other is at work
 Feed Pumps { No. and size 2 main 13 1/2" x 10" x 24" Pumps connected to the { No. and size 1 Bilge 9" x 10" x 10" 1 Ball 10" x 14" x 15" deep.
 How driven steam aux 13 1/2" x 10" x 24" Main Bilge Line { How driven steam dup.
 Ballast Pumps, No. and size 1 10" x 14" x 15" duplex Lubricating Oil Pumps, including Spare Pump, No. and size 1
 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 4 of 3" dia (fittings supplied)
 In Holds, &c. ✓

See Ltr 2577/28 + plans

Main Water Circulating Pump Direct Bilge Suctions, No. and size 2 of 8" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1 of 4 1/2" (fittings supplied) 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 test pipes to the bilges yes
 Are all Sea Connections fitted direct on the skin of the ship no Are they fitted with Valves or Cocks yes
 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 above
 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 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 door yes worked from main deck

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 12656 square feet
 Is Forced Draft fitted yes No. and Description of Boilers 6 single ended Working Pressure 190 lbs
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? Yes If so, is a report now forwarded? See Middlebro' report
 PLANS. Are approved plans forwarded herewith for Shafting ✓ Main Boilers yes Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)
 Superheaters ✓ General Pumping Arrangements ✓ Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:—2 connec rod top end bolts and nuts of each size, 2 bottom end ditto of
each size 4 main bearing ditto, 2 sets of coupling bolts and nuts, 1 set of piston rings and springs
for each eng. 1 propeller shaft & nut, 8 cast iron propeller blades, 3 bolts for propeller shaft muff coupling
3 main feed check valves 3 aux. feed check valves, 3 air pumps, steam valve chest, piston rings pump,
bucket pump & group valves for one pump, for circulating pumps, impeller & shaft, piston rings
rod for one engine, for main feed, general service ballast, bilge, sanitary, hot water, & fresh water
pumps, packing rings for pistons & pump buckets for each size & one set of valves, seats & springs
Also various spare parts for air pumps & fan engines.
Assorted bolts, nuts and iron

The foregoing is a correct description,
 For RICHARDSON'S WESTGARTH & Co. Ltd.

(S) W. J. Guthrie, General Manager
Hartlepool (Works)

Manufacturer.



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1924 May 23, 25, 31. June 14, 22, 27, 28, 29, 30. July 4, 6, 7, 8, 11, 12, 13, 14, 15, 18, 19, 20, 26, 28. Aug 8, 9, 10, 11
During progress of work in shops - - 12, 15, 17, 18, 19, 22, 24, 25, 30, 31, Sept. 1, 2, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 19, 21, 22, 23, 26, 27, 28, 29, 30. Oct. 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 31. Nov. 1, 3, 9, 10, 14, 15, 17, 18, 21, 22, 23, 24, 28 Dec 14.
Dates of Survey while building 4
During erection on board vessel - - - Dec 9, 20, 27 Jan 10, 19 Feb 2, 17 Mar 3, 9, 16, 23, 30 April 4, 11, 19, 24, 27
Total No. of visits 95 & 21.

Dates of Examination of principal parts—Cylinders 28.6.27-17.10.27 Slides 28.6.27-16.4.27 Covers 9.8.27-16.9.27
Pistons 28.6.27-7.10.27 Piston Rods 24.8.27-29.9.27 Connecting rods 28.6.27-11.10.27
Crank shaft 19.7.27-3.10.27 Thrust shaft 22.9.27-25.10.27 Intermediate shafts 30.9.27-24.11.27
Tube shaft 28.9.27-19.10.27 Screw shaft 6.10.27-24.10.27 Propeller 5.9.27-12.10.27
Stern tube 28.9.27-19.10.27 Engine and boiler seatings 14.11.27 Engines holding down bolts 20.12.27
Completion of fitting sea connections 2.2.28
Completion of pumping arrangements 30.3.28 Boilers fixed 2-2-28 Engines tried under steam 8.5.28
Main boiler safety valves adjusted 8.5.28 Thickness of adjusting washers 5/16" P 1/2" S 3/8" P 15/32" S 15/32" P 19/32"
Crank shaft material Ingot steel Identification Mark 6388 H. Thrust shaft material Ingot steel Identification Mark 5448 X
Intermediate shafts, material Ingot steel Identification Marks 5448 D Tube shaft, material at Glasgow Identification Mark
Screw shaft, material Ingot steel Identification Mark 5464 D Steam Pipes, material steel Test pressure 570 lbs Date of Test
Is an installation fitted for burning oil fuel fu Is the flash point of the oil to be used over 150° F. fu
Have the requirements of the Rules for the use of oil as fuel been complied with fu
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
Is this machinery duplicate of a previous case yes If so, state name of vessel Davis SB 605 No 496.
General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines and boilers have been built under special survey. The materials and workmanship are good. The cylinders have been tested by hydraulic pressure H.P. to 285 lbs, M.P. to 60 lbs, L.P. to 30 lbs, and condensers to 18 lbs.
The boiler mountings and the main steam isolating and bulkhead valves, junction pieces and expansion joints and the valves on the main engines tested to 400 lbs for cast iron and brass and 570 lbs for cast steel. The feed heater tubes and headers and feed delivery fittings tested to 460 lbs and the body of the feed heater to 50 lbs.
For the main steam pipes see Glasgow Report accompanying.
The machinery has been despatched to Quebec for fitting on board.

The machinery has been properly fitted on board and on completion tried under steam and found satisfactory.
The safety valves have been adjusted under steam and tested for accumulation which did not exceed 10 lbs per sq. in.
In my opinion the vessel is eligible for the record L. M. C. 5.28. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD.
+ L.M.C. 5.28 F.D. CL.
Fitted for oil fuel 5.28 J.P. above 150° F.
(Signed) R. D. Shilston and A. Daintith. 4
Engineer Surveyor to Lloyd's Register of Shipping.
The amount of Entry Fee ... £ 150.00
Special ... £
Donkey Boiler Fee ... £
Travelling Expenses (if any) £
When applied for, 19
When received, 19
TUES. 14 AUG 1928
Committee's Minute
Assigned
+ L.M.C. 5.28 3D, CL.
Fitted for oil fuel 5.28 J.P. above 150° F.

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