

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 48624

Date of writing Report 19 When handed in at Local Office 20. 11. 1928 Port of Glasgow 21 NOV 1928
 No. in Survey held at Glasgow Date, First Survey 23. 4. 28 Last Survey 19. 11. 1928
 Reg. Book. on the Screw Steamer. "PRINCESS NORAH" (Number of Visits 74)
 Built at Glasgow By whom built The Fairfield S.B. & E.C. Co. Yard No. 632 Tons Gross 1845
 Engines made at Glasgow By whom made The Fairfield S.B. & E.C. Co. Engine No. 632 When built 1918
 Boilers made at Smith By whom made Smith Boiler No. 632 when made 1918
 Registered Horse Power Owners Canadian Pacific Railway Co. Port belonging to Vancouver.
 Nom. Horse Power as per Rule 434. Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which Vessel is intended Carrying British Columbia.

ENGINES, &c.—Description of Engines Triple Expansion
 Dia. of Cylinders 24-38-45-45 Length of Stroke 36 No. of Cylinders 4 Revs. per minute 150
 Crank shaft, dia. of journals as per Rule 12.02 Length of Stroke 36 No. of Cranks 4
 as fitted 12.44 Crank pin dia. 12.78 Crank webs Mid. length breadth 20 Thickness parallel to axis 8.2
 Intermediate Shafts, diameter as per Rule 11.45 Mid. length thickness 8.2 Thickness around eye-hole 5.8
 as fitted 11.34 Thrust shaft, diameter at collars as per Rule 12.02
 as fitted 12.4 Tube Shafts, diameter as per Rule 12.50
 as fitted None Screw Shaft, diameter as per Rule 12.50
 as fitted 12.50 Is the screw shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per Rule .68 Thickness between bushes as per Rule .51
 as fitted 3/4 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 In joints
 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 No.
 Propeller, dia. 12-6 Pitch 11-3/13-3 No. of Blades 4 Material Bronze whether Moveable Yes Total Developed Surface 53.8 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter — Stroke — Can one be overhauled while the other is at work —
 Bilge Pumps worked from the Main Engines, No. 2 Diameter — Stroke — Can one be overhauled while the other is at work —
 Feed Pumps No. and size 2-8x10/1x22, 1-4x6x12 Pumps connected to the Main Bilge Line No. and size 1-6x7x7, 1-6x6x6, 1-6x6x6
 How driven Steam How driven Steam
 Ballast Pumps, No. and size 1-6x7x7 Lubricating Oil Pumps, including Spare Pump, No. and size 2
 Are two independent means arranged for circulating water through the Oil Cooler
 Bilge Pumps;—In Engine and Boiler Room 4-2 1/2 Tunnel Wall 1-2 1/2 Box. O.F. Main Spaces 2-2 1/2
 In Holds, &c. In 1 Hold 2-2 1/2 In 2 Hold 2-2 1/2

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-9
 No. and size 1-3 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 As far as practicable
 Are all Sea Connections fitted direct on the skin of the ship Yes 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 on water line
 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 Starboard

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 7042 sq. ft.
 Is Forced Draft fitted Yes No. and Description of Boilers 3 Cyl. Single End Working Pressure 200 lb. sq. in.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? —

PLANS. Are approved plans forwarded herewith for Shafting 17.2.18 Main Boilers 17.2.18 Auxiliary Boilers — Donkey Boilers —
 (If not state date of approval)
 Superheaters — General Pumping Arrangements 23.5.28 Oil fuel Burning Piping Arrangements 27.4.28

SPARE GEAR. State the articles supplied:—

4 - top end bolts & nuts.	2 - complete both end bushes.	100 - condenser ferrules.
4 - bott. end " " "	2 - " top end "	1 - spring for each escape valve.
2 - main bearing bolts & nuts.	24 - junk ring studs.	6 - feed check valves.
12 - coupling bolts & nuts.	1 - set rings for H.P. & M.P. piston valves.	1 - air pump bucket & rod.
1 - set of valves for each pump.	2 - valve spindles complete.	1 - impeller & spindle.
1 - complete set of piston rings.	2 - ecc. rods complete.	50 - plain boiler tubes.
200 - bolts & nuts.	2 - ecc. straps complete.	10 - stay " "
Iron of various sizes.	2 - propeller blades.	etc.
1 - tail end shaft.	8 - " studs & nuts.	
2 - piston rods.	50 - condenser tubes.	

THE FAIRFIELD SHIPBUILDING AND ENGINEERING CO.,
 The foregoing is a correct description,

R. Strachan
 MANAGER

Manufacturer.



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009904-009911-0291

Dates of Survey while building
During progress of work in shops -- 1928 Apr 23-26 May 1-8 11-17 24-29 Jun 4-8 15-26 29 July 2-5 10-25 27-30 31 Aug 2-3 6-7 8-10 13
15-16 17-20 21-22 23-27 28-29 31 Sep 3-5 6-7 11-12 13-17 18-19 20-25 26-27 Oct 1-3 4-8 9-11 12-13
During erection on board vessel --- 15-17 19-20 23-26 29 Nov 6-8 12-13 14-16 19
Total No. of visits 74

Dates of Examination of principal parts—Cylinders 29.8.28 Slides 29.8.28 Covers 29.8.28
Pistons 15.8.28 Piston Rods 15.8.28 Connecting rods 15.8.28
Crank shaft 30.7.28 Thrust shaft 30.7.28 Intermediate shafts 30.7.28
Tube shaft *hmc* Screw shaft 11.9.28 Propeller 19.9.28
Stern tube 19.9.28 Engine and boiler seatings 15.8.28 Engines holding down bolts 26-10-28.
Completion of fitting sea connections 18.9.28.
Completion of pumping arrangements 6-11-28. Boilers fixed 6-11-28. Engines tried under steam 12-11-28.
Main boiler safety valves adjusted 6-11-28. Thickness of adjusting washers *FORD 3/16" AET. 3/16" FORD 3/16" AET. 3/16" FORD 3/16" AET. 3/16"*
Crank shaft material 545. Identification Mark 632 *W.L.* Thrust shaft material 545 Identification Mark 15 *N.W.L.*
Intermediate shafts, material 545. Identification Marks 16 *N. 17 N. 18 N.* Shaft, material *hmc* Identification Mark ---
Screw shaft, material 545. Identification Mark 14 *N.* Steam Pipes, material *Steel* Test pressure 600 *lb* Date of Test 20-10-28.
Is an installation fitted for burning oil fuel *Yn* Is the flash point of the oil to be used over 150°F. *Yn*
Have the requirements of the Rules for the use of oil as fuel been complied with *Yn*
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *hmc* If so, have the requirements of the Rules been complied with ---
Is this machinery duplicate of a previous case *hmc* If so, state name of vessel ---

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under special survey in accordance with the Rules. The materials & workmanship are good & the machinery has been efficiently secured on board and properly tried under working conditions. The machinery is eligible in our opinion to have record of + L.M.C. 11.28 and fitted for oil fuel 11.28. F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11.28 F.P. C.L. Fitted for oil fuel 11.28 F.P. above 150°F

W. R. J. MacDonald
27/11/28

The amount of Entry Fee ... £ 5 : - :
Special ... £ 90 : 11 : 20 NOV 1928
Donkey Boiler Fee ... £
Travelling Expenses (if any) £
When applied for, 20 NOV 1928
When received, 25-1-29

Committee's Minute GLASGOW 20 NOV 1928

Assigned + L.M.C. 11.28 F.D.

Fitted for oil fuel 11.28 F.P. above 150°F.



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