

REPORT ON MACHINERY.

No. 15250
34057

Date of writing Report 7. 7. 1917 When handed in at Local Office 6. 9. 1917 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 16th Feb. 1915 Last Survey 10th July 1914
 Reg. Book. on the s/s Broompark (Number of Visits 43)
 Master Built at Glasgow By whom built Greenock Glasgow 830.29 Tons Gross 2126.19
 Engines made at Glasgow By whom made Dunsen & Jackson L^{td} (462) when made 1917
 Boilers made at ditto By whom made ditto (368) when made 1917
 Registered Horse Power 220 Owners The Denholm Line Steamers, Ltd Port belonging to Greenock
 Nom. Horse Power as per Section 28 220 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion. No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 21" 36" 57" Length of Stroke 26" Revs. per minute 117 Dia. of Screw shaft as per rule 12 3/8" Material of screw shaft Iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
 in the propeller boss Yes If the liner is in more than one length are the joints burned 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 Length of stern bush 49 1/2"
 Dia. of Tunnel shaft as per rule 10.26 Dia. of Crank shaft journals as per rule 10.77 Dia. of Crank pin 11 1/8" Size of Crank webs 4 1/8" 22" Dia. of thrust shaft under
 collars 11 Dia. of screw 14.9" Pitch of Screw 15.6" No. of Blades 4 State whether moveable No Total surface 75.2"
 No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 18" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 18" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 9 1/2" 11" 10.4" 2 3/4" 4.5" 7 1/2" 5.8" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2, 2 1/2" 1, 3" In Holds, &c. 2 in each hold 2 1/4" 1 in hold 1 1/2"
 1 in tunnel 1 1/2"
 No. of Bilge Injections 1 sizes 4" Connected to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3"
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes 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 are carried through the bunkers None How are they protected —
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Dates of examination of completion of fitting of Sea Connections 27. 29/6/17 of Stern Tube 27. 29/6/17 Screw shaft and Propeller 29/6/17
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Babcock & Wilcox L^{td} of Glasgow.
 Total Heating Surface of Boilers R. Is Forced Draft fitted No No. and Description of Boilers 2 Single ended.
 Working Pressure 180 Tested by hydraulic pressure to 260 Date of test 4-4-17 No. of Certificate 13750
 Can each boiler be worked separately Area of fire grate in each boiler 56 3/4" No. and Description of Safety Valves to
 each boiler for further particulars see Report on Boiler accessories fitted in Report.
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
 Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 plate Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— *Manufacturers of Steel in Special Sheet*

No. Description
 Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
 Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
 If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length
 Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams Rivets
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Plates
 Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
 Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
 Working pressure of furnace by rules Thickness of furnace crown plates Radius of do. Stayed by
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— *Two top end and two bottom end connecting rods bolts and nuts, two main bearing bolts, one set coupling bolts, one set fuel and life pump valves, assorted bolts and nuts, Iron of various sizes.*

DUNSMUIR & JACKSON, Limited.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
 During progress of work in shops:— 1915 Feb. 16/19. Jan. 8. 16. 23. 25. 30. Apr. 1. 7. 8. 26. May. 12. 22. 24. 28. July. 13. 29. Aug. 9. Sept. 30. 1916 May. 15. 18. June. 16. Aug. 14.
 During erection on board vessel:— 1914. June 5, 29, July 2, Aug. 9, 23. 1915. Jan. 6. 12. 17. Feb. 13. 16. 26. 28. Jan. 5. 9. 15. 22. 24. Apr. 11. May. 8. June. 21. July 10.
 Total No. of visits 4 5 5
 Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 5. 2 17 Slides 9. 3 17 Covers 5 3. 17 Pistons 16 2 17 Rods 15. 3. 17
 Connecting rods 15-3 17 Crank shaft 17. 1-17 Thrust shaft 17. 1-17 Tunnel shafts 28. 2. 17 Screw shaft 11. 4. 17 Propeller 11. 4. 17
 Stern tube 24-3-17 Steam pipes tested 10. 7. 17 Engine and boiler seatings 5/6 23/8/17 Engines holding down bolts 2/7/16
 Completion of pumping arrangements 23/8/17 Boilers fixed 23/8/17 Engines tried under steam 23/8/17
 Main boiler safety valves adjusted 23/8/17 Thickness of adjusting washers 1/8 5/8 1/8 5/8
 Material of Crank shaft S Identification Mark on Do. LHOXDS Material of Thrust shaft S Identification Mark on Do. LHOXDS
 Material of Tunnel shafts Iron Identification Marks on Do. 462 Material of Screw shafts Iron Identification Marks on Do. 462
 Material of Steam Pipes Iron Test pressure 5 H 0 1 1 0 4

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines have been built under special survey. The workmanship & material are of good quality. The machinery is eligible in my opinion for the record of L.M.C. with date when fitted on board & tried under steam.

This machinery is a duplicate of No 462 fitted in the S/S Seaford Lsb Repl No 36349.

The engines have not been shipped to Leith at which port they will be fitted on board. The machinery for this vessel has now been fitted on board in a satisfactory manner and under the vessel ship in my opinion to have run.

1-1 L.M.C. 8.17. 1917
 The amount of Entry Fee .. £ 30-4-19
 Special 21-0-0
 Donkey Boiler Fee .. £ 10-0-0
 Travelling Expenses (if any) £ 14-0-0

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute GLASGOW. 31 JUL 1917

Assigned Deferred for completion

MACHINERY CERTIFICATE
 WRITTEN

Lloyd's Register
 Foundation