

REPORT ON MACHINERY.

No. 15250
34054

Received at London Office

AUG 1917

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 1917
Reg. Book. on the s/s Broompark (Number of Visits 43)

Master Built at Glasgow By whom built Greenock Glasgow 83029 Tons Gross 2126.19 Net 1311.12
Engines made at Glasgow By whom made Dunsen & Jackson L^o (462) when made 1917
Boilers made at ditto By whom made ditto (368) when made 1917

Registered Horse Power Owners The Denholm Line Steamers, Ltd Port belonging to Greenock
Nom. Horse Power as per Section 28 220 228 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 11.7 as fitted 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 No 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 No

If two liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 49 1/2"

Dia. of Tunnel shaft as per rule 10.26 as fitted 10.7/8 Dia. of Crank shaft journals as per rule 10.77 as fitted 11 Dia. of Crank pin 11 1/8" Size of Crank webs 118x22" 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 9x11 10.4x2 3/4 10.5x4 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"

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 2/6, 29/6/17 of Stern Tube 2/6, 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^o Spencer.

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 plate Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top bottom Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings

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

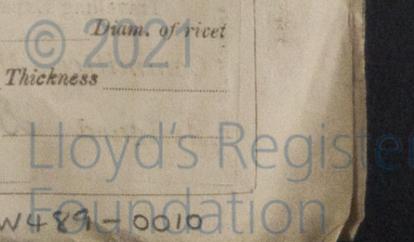
Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter 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

If used, state whether, and when, one will be sent

00, 25, 27307
o. of Visits 118



VERTICAL DONKEY BOILER— *Manufacturers of Steel in separate 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 casing 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 _____ Plates _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____
 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 rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set fuel and bilge pump valves, assorted bolts and nuts, Iron of various sizes.*

DUNSMUIR & JACKSON, Limited.
 The foregoing is a correct description,
James Fletcher Manufacturer.

Dates of Survey while building	During progress of work in shops	During erection on board vessel	Total No. of visits
1915 Feb. 16, 19. Mar. 8, 16, 23, 25, 30 Apr. 1, 7, 8, 26 May. 10, 22, 24, 28 July. 13, 29 Aug. 9, 16, 30 Sept. 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 Oct. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 Nov. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 Dec. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30	1914 June 5, 29, July 2, Aug. 9, 23, 25	1914 June 5, 29, July 2, Aug. 9, 23, 25	4

Is the approved plan of main boiler forwarded herewith _____

_____ " " " donkey " " "

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 *Std. tril. P. 5/8 S. 5/8. Nut tril. P. 5/8 S. 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. *H62* Material of Screw shafts *Iron* Identification Marks on Do. *H62*

Material of Steam Pipes *Iron* Test pressure *5 H 0 lb*

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 draft of No H62 fitted in the S/S Heathpark Esb Repl No 36349.

The engines have not been shipped to Leith at present port they will be fitted on board. The machinery for this vessel has now been fitted on board in a satisfactory manner and unless the vessel shifts in my opinion to have used it is submitted that this vessel is eligible for THE RECORD. + L.M.C. 8.17.

1-1 L.M.C. 8.17. W. Gordon

The amount of Entry Fee .. £	When applied for,
Special <i>21.0-0</i> £ <i>30</i>	<i>30. 4. 1917</i>
Donkey Boiler Fee .. £ <i>10</i>	When received,
Travelling Expenses (if any) £ <i>14</i>	<i>10/8 1917</i>

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

Committee's Minute **GLASGOW.** 31 JUL 1917
 Assigned *Deferred for completion*

TUE. 18 SEP. 1917
 + L.M.C. 8.17
MACHINERY CERTIFICATE
 WRITTEN.

Certificates (if required) to be sent to the Secretary of the Committee's Minute.

L.M.C. 30/7/17