

REPORT ON MACHINERY.

No. 34226

WED. JUL. 15. 1914

Date of writing Report 13. 7. 14 When handed in at Local Office 13. 7. 14 Port of Glasgow.
 No. in Survey held at Glasgow. Date, First Survey 22-1-14 Last Survey 11. 7. 1914
 Reg. Book. 10 Sup. the S.S. "BIDDY" (Number of Visits 17)
 Master Richardson Built at Larne By whom built Larne Shipbuilding Co (Nº 666) Tons } Gross }
 Engines made at Glasgow. By whom made Gaudie, Gillespie & Co (Nº 126) when made 1914 } Net }
 Boilers made at do. By whom made James Neilson & Son Ltd (Nº 3359) when made (made 1906) }
 Registered Horse Power _____ Owners The Premier Tug Co. Ltd. Port belonging to Hull
 Nom. Horse Power as per Section 28 64 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound surface condensing No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 14" 35" Length of Stroke 24" Revs. per minute 126 Dia. of Screw shaft 1 1/2" 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 Yes 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 Yes
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2'-6"
 Dia. of Tunnel shaft 6 3/8" Dia. of Crank shaft journals 4 1/2" Dia. of Crank pin 4 3/8" Size of Crank webs 10 1/2 x 5" Dia. of thrust shaft under collars 4 3/8" Dia. of screw 8'-0" Pitch of Screw 10'-0" No. of Blades 4 State whether moveable No Total surface 26 sq ft
 No. of Feed pumps 1 Diameter of ditto 2 5/8" Stroke 12" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 2 5/8" Stroke 12" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 1 Sizes of Pumps 5 1/2", 3 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 1-2" E.P., 1-2" special, 1-2" stokehold In Holds, &c. 1-2" fwd cabin, 1-2" aft cabin
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes - 2"
 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 Yes
 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 Feed and steam pipes How are they protected Steel tubes
 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 See Belfast Tug Report. Screw shaft and Propeller _____
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from _____

BOILERS, &c.—(Letter for record See Belfast Tug Report.) Manufacturers of Steel Steel Company of Scotland
 Total Heating Surface of Boilers 1230 sq ft Is Forced Draft fitted No No. and Description of Boilers One single ended marine
 Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 1.5.14 No. of Certificate 12691
 Can each boiler be worked separately Yes Area of fire grate in each boiler 49 sq ft No. and Description of Safety Valves to each boiler Pair spring loaded Area of each valve 4.04 sq in Pressure to which they are adjusted 135 lbs. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 6'-8" Mean dia. of boilers 12'-0" Length 10'-0" 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 _____ 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 _____ Thickness of plates _____ 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 _____



VERTICAL DONKEY BOILER— Manufacturers of Steel

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 _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ 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:— 2 top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set feed and bilge pump valves, quantity assorted bolts & nuts and a tin of various sizes.

The foregoing is a correct description,

Manufacturer.

Sauldie Gillespie & Co

Dates of Survey while building { During progress of work in shops -- } 1913. Jan 22. Mar 11. Apr 16. May 16. June 2. 4. 5. 10. 16. 22. 23. 25. 30. July 1. 8. 11.
 { During erection on board vessel --- }
 Total No. of visits 17. Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts—Cylinders 2. 6. 14 Slides 1. 5. 14 Covers 2. 6. 14 Pistons 1. 5. 14 Rods 1. 5. 14
 Connecting rods 1. 5. 14 Crank shaft 10. 6. 14 Thrust shaft 16. 4. 14 Tunnel shafts 16. 4. 14 Screw shaft 16. 4. 14 Propeller 16. 4. 14
 Stern tube 16. 4. 14 Steam pipes tested 23. 6. 14 Engine and boiler seatings 16. 6. 14 Engines holding down bolts 25. 6. 14
 Completion of pumping arrangements 25. 6. 14. Boilers fixed 22. 6. 14. Engines tried under steam 11. 7. 14
 Main boiler safety valves adjusted 1. 7. 14. Thickness of adjusting washers 13/32 P, 1/32 S.
 Material of Crank shaft Iron Identification Mark on Do. LLOYDS No 454 16. 4. 14 P.T.B. Material of Thrust shaft Steel Identification Mark on Do. LLOYDS No 126 16. 4. 14 P.T.B.
 Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS No 126 16. 4. 14 P.T.B. Material of Screw shafts Iron Identification Marks on Do. LLOYDS No 126 16. 4. 14 P.T.B.
 Material of Steam Pipes Copper. Test pressure 300 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) The materials and workmanship are good.

The construction of these engines was begun in 1906 by the Caledonian Engineering Co., Preston and finished by Messrs Stevenson & Co Preston. The crank shaft was made under survey at the Inch Forge Co. Wigton.

The proposed classification of this machinery was dealt with in London letters E 11/20th. The boiler, thrust, intermediate and tail shafts, stern tube, propeller, sea cocks & valves &c have been built under special survey and the main engines have been opened out and all parts examined. found satisfactory & do not have suffered no deterioration.

The machinery & boiler have been securely fitted aboard and tried with satisfactory results under steam & are, in my opinion, suitable for classification with record L.M.C. 4. 14

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 7. 14.

The amount of Entry Fee .. £ 1: - 0 - 0 When applied for,
 Special £ 5 - 19 - 6 19/71 - 19/14.
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : : 15/7/14

P. J. Brown
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 16/7/14

Committee's Minute GLASGOW 14 JUL 1914

Assigned * L.M.C. 7. 14 subject to classification of hull

FRI. JUL. 24. 1914
 Lloyd's Register Foundation

Certificate (if required) to be sent to GLASGOW

2 AM 13/7/14