

REPORT ON MACHINERY.

No. 72681

Received at London Office TUES. 24 MAY 1911

of writing Report 6/5/10 19 When handed in at Local Office 10 Port of London
 in Survey held at 95 Yarmouth Date, First Survey 23/Sept. 1909 Last Survey 29/4/10 19
 g. Book. on the Machinery of S.S. "Friargate" (Number of Visits 11) Tons { Gross 264
 Master John Williams Built at 95 Yarmouth By whom built Crabtree & Co Ltd Net 194
 Lines made at Yarmouth By whom made Crabtree & Co Ltd When built 1910-4
 lers made at Stockton By whom made Riley Bros when made 1910-4
 istered Horse Power Owners North Lancashire S.S. Co (R. Single) Port belonging to Fleetwood
 e. Horse Power as per Section 28 60 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

FINES, &c.—Description of Engines Compound surface condensing No. of Cylinders two No. of Cranks two
 of Cylinders 16" x 33" Length of Stroke 22" Revs. per minute 120 Dia. of Screw shaft as per rule 7.26" Material of steel
 he screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight
 he 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
 een the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two
 s are fitted, is the shaft lapped or protected between the liners Lapped two liners fitted Length of stern bush 36"
 of Tunnel shaft as per rule 6.46" Dia. of Crank shaft journals as per rule 6.72" Dia. of Crank pin 7 1/4" Size of Crank webs 10" x 5" Dia. of thrust shaft under
 rs 7 1/4" Dia. of screw 96" Pitch of Screw 9'-0" No. of Blades 4 State whether moveable yes Total surface 2529 ft.
 of Feed pumps one Diameter of ditto 2 1/4" Stroke 11" Can one be overhauled while the other is at work ✓
 of Bilge pumps one Diameter of ditto 2 1/4" Stroke 11" Can one be overhauled while the other is at work ✓
 of Donkey Engines two Sizes of Pumps Ballast & Bilge 7 x 8" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room one 2" diam Feed 3 1/2" duplex In Holds, &c. Two 2" diam in hold one 2" diam in
ru & After peaks.
 of Bilge Injections one sizes 3 1/2" Connected to condenser, or to circulating pump yes As a separate Donkey Suction fitted in Engine room & size yes 2"
 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
 all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
 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
 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
 it pipes are carried through the bunkers forward suction How are they protected under ceiling
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 es of examination of completion of fitting of Sea Connections 9-3-10 of Stern Tube 9-3-10 Screw shaft and Propeller 9-3-10
 he Screw Shaft Tunnel watertight none Is it fitted with a watertight door ✓ worked from ✓

LERS, &c.—(Letter for record) Manufacturers of Steel
 d Heating Surface of Boilers 1150 Is Forced Draft fitted no No. and Description of Boilers one single ended
 king Pressure 130 lbs Tested by hydraulic pressure to ✓ Date of test ✓ No. of Certificate 4350
 each boiler be worked separately ✓ Area of fire grate in each boiler No. and Description of Safety Valves to
 boiler two spring loaded Area of each valve 4.9 sq" Pressure to which they are adjusted 135 lbs Are they fitted with easing gear yes
 llest distance between boilers or uptakes and bunkers or woodwork 3'-6" Mean dia. of boilers Length Material of shell plates
 ness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
 seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 th of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 king pressure of furnace by the rules bottom Thickness of plates bottom Working pressure by rules
 of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 rial of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
 rial Thickness Pitch of stays How are stays secured none Working pressure by rules Material of stays
 eter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 ness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 eter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 h across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 ickness 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 _____

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 _____ 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 bolts, Two bottom end bolts, Two main bearing bolts, one set of coupling bolts, one set of valves for each pump, a quantity of bolts nuts & iron of various sizes

The foregoing is a correct description,

Manufacturer.

ORABTREE & CO., LIMITED

Secretary.

Dates of Survey while building { During progress of work in shops - '09 Sept. 23. Nov. 17.25. Dec. 7.15; '10 Jan. 4
During erection on board vessel - Mar. 9.10; Apr. 20.23.29
Total No. of visits 11

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 25-10-09 & 14-12-09 Covers 25-10-09 & 14-12-09 Pistons 25-10-09 Rods 25-10-09
Connecting rods 14-12-09 Crank shaft 14-12-09 Thrust shaft 14-12-09 Tunnel shafts ✓ Screw shaft 9-3-10 Propeller 9-3-10
Stern tube 9-3-10 Steam pipes tested Hull Engine and boiler seatings 10-2-10 Engines holding down bolts 18-4-10
Completion of pumping arrangements 23-4-10 Boilers fixed 18-4-10 Engines tried under steam 23-4-10
Main boiler safety valves adjusted 18-4-10 Thickness of adjusting washers Port 9/32 Starboard 13/64
Material of Crank shaft steel Identification Mark on Do. 2PP1 WDH Material of Thrust shaft steel Identification Mark on Do. 7PPF
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shaft steel Identification Marks on Do. 7PPF
Material of Steam Pipes copper Test pressure 260 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.) The Machinery of this vessel has been constructed under special survey & in accordance with the rules of the Society & the workmanship is good. It has been properly fitted on board the vessel & on completion was satisfactorily tested under steam.
In my opinion it is eligible for the record + L.M.C. 4.10.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 4.10

24.5.10.

The amount of Entry Fee £ 1 : 0 : 0 When applied for, 24/5/10
Special .. £ 6 : 0 : 0
Donkey Boiler Fee .. £ ✓ : :
Travelling Expenses (if any) £ 4 : 0 : 5 18-7-10

Frank H. Sturgeon

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

Committee's Minute

FRI. 27 MAY 1910

Assigned

L.M.C. 4.10



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