

REPORT ON MACHINERY.

No. 26714

Date of writing Report 2nd June 1908 When handed in at Local Office 4th June 1908 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 4th March Last Survey 2nd June 1908
 Reg. Book. on the P. S. "Engie" (Number of Visits 14)

Master Boran Built at Govan By whom built Macfie & Thomson (1st 378) Tons 1908
 Engines made at Glasgow By whom made Houldie & Gillespie (1st 86) when made 1908
 Boilers made at Collopy & Sons By whom made A. & W. Dalglisk (1st 373) when made 1908
 Registered Horse Power 37 Owners John Hendry Port belonging to Buchie
 Nom. Horse Power as per Section 28 37 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 9", 14", 24" Length of Stroke 16" Revs. per minute 140 Dia. of Screw shaft 5.01" Material of steel
 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 If two
 liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 1' 10"
 Dia. of Tunnel shaft 4.4" Dia. of Crank shaft journals 4.62" Dia. of Crank pin 5" Size of Crank webs 3 1/4" x 9" Dia. of thrust shaft under
 collars 5" Dia. of screw 6.3" Pitch of Screw 8.0" No. of Blades 4 State whether moveable no Total surface 19 sq ft
 No. of Feed pumps 1 Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 1 Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work yes
 No. of Donkey Engines one Sizes of Pumps 4 3/4" x 2 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 - 2" & 1 special 2" & 1 each 2" & 1 each 2" In Holds, &c. Fish Room 1 - 2" fore hatch 1 - 2"
 No. of Bilge Injections 1 sizes 2" Connected to condenser, or to circulating pump pump 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 none How are they protected yes
 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 4.5.08 of Stern Tube 5.5.08 Screw shaft and Propeller 5.5.08
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 723 sq ft Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15.5.08 No. of Certificate 8485
 Can each boiler be worked separately yes Area of fire grate in each boiler 3.14 sq ft No. and Description of Safety Valves to
 each boiler double spring loaded Area of each valve 3.14 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 3" Length 7' Material of shell plates
 Thickness 3/16" Range of tensile strength 45,000 lbs Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams
 long. seams yes Diameter of rivet holes in long. seams 3/16" Pitch of rivets 4" Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint 85% Working pressure of shell by rules 185 lbs Size of manhole in shell 18"
 Size of compensating ring 18" No. and Description of Furnaces in each boiler one Material steel Outside diameter 36"
 Length of plain part 10' Thickness of plates 3/16" Description of longitudinal joint butt No. of strengthening rings 1
 Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material steel Thickness: Sides 3/16" Back 3/16" Top 3/16" Bottom 3/16"
 Pitch of stays to ditto: Sides 4" Back 4" Top 4" If stays are fitted with nuts or riveted heads yes Working pressure by rules 185 lbs
 Material of stays steel Diameter at smallest part 1/2" Area supported by each stay 1.5 sq ft Working pressure by rules 185 lbs End plates in steam space:
 Material steel Thickness 3/16" Pitch of stays 4" How are stays secured with nuts Working pressure by rules 185 lbs Material of stays steel
 Diameter at smallest part 1/2" Area supported by each stay 1.5 sq ft Working pressure by rules 185 lbs Material of Front plates at bottom steel
 Thickness 3/16" Material of Lower back plate steel Thickness 3/16" Greatest pitch of stays 4" Working pressure of plate by rules 185 lbs
 Diameter of tubes 2" Pitch of tubes 4" Material of tube plates steel Thickness: Front 3/16" Back 3/16" Mean pitch of stays 4"
 Pitch across wide water spaces 4" Working pressures by rules 185 lbs Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 4" Length as per rule 4" Distance apart 4" Number and pitch of stays in each 1
 Working pressure by rules 185 lbs Superheater or Steam chest; how connected to boiler direct Can the superheater be shut off and the boiler worked
 separately yes Diameter 2" Length 4" Thickness of shell plates 3/16" Material steel Description of longitudinal joint butt Diam. of rivet
 holes 3/16" Pitch of rivets 4" Working pressure of shell by rules 185 lbs Diameter of flue 2" Material of flue plates steel Thickness 3/16"
 If stiffened with rings yes Distance between rings 4" Working pressure by rules 185 lbs End plates: Thickness 3/16" How stayed with stays
 Working pressure of end plates 185 lbs Area of safety valves to superheater 1.5 sq ft Are they fitted with easing gear yes

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 _____ 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 _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed and bilge pumps: a quantity of assorted bolts & nuts: iron of various sizes

The foregoing is a correct description,

Manufacturer.

Paulding & Sons

Dates of Survey while building: During progress of work in shops— 1908. March 4. 19. Apr. 6. 14. 17. 23. May 2. 5. 8. 14. 20. 23. 26. June 2.
 During erection on board vessel —
 Total No. of visits 14.
 Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 14.4.08 Slides 14.4.08 Covers 14.4.08 Pistons 6.4.08 Rods 6.4.08
 Connecting rods 6.4.08 Crank shaft 14.5.08 Thrust shaft 14.5.08 Tunnel shafts 14.5.08 Screw shaft 2.5.08 Propeller 23.4.08
 Stern tube 14.4.08 Steam pipes tested 23.5.08 Engine and boiler seatings *examined at* *Barling* Engines holding down bolts 26.5.08
 Completion of pumping arrangements 2.6.08 Boilers fixed 26.5.08 Engines tried under steam 2.6.08
 Main boiler safety valves adjusted 2.6.08 Thickness of adjusting washers Port. 1/4" F. Star 1/4" F.
 Material of Crank shaft Steel Identification Mark on Do. 86 Material of Thrust shaft Steel Identification Mark on Do. 86
 Material of Tunnel shafts Steel Identification Marks on Do. 86 Material of Screw shafts Steel Identification Marks on Do. 86
 Material of Steam Pipes Copper Test pressure 400 lbs per sq. in.

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

The machinery has been built under special survey: the material and workmanship being good, and satisfactorily tested under steam. It is submitted that above vessel will be eligible for a record of + L.M.C. 6.08 in the Register Book.

It is submitted That This vessel is eligible for The record of + L.M.C. 6.08 Subject to some minor damage being made good & examined at Aberdeen

ARRR
 18/6/08

The amount of Entry Fee... £ 1.0.0 When applied for, 4/6/1908
 Special ... £ 8.0.0
 Donkey Boiler Fee ... £ : : When received, 6/6/1908
 Travelling Expenses (if any) £ : :
 Committee's Minute GLASGOW 16 JUN. 1908

Assigned + L.M.C. 6.08

subject

A. S. Thomas

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

TUES. 22 JUN 1909

FRI. 14 AUG 1909

FRI. 9 OCT 1909

TUES. 12 OCT 1909

Lloyd's Register Foundation