

REPORT ON MACHINERY.

No. 26714

Received at London Office

WED. 17 JUN 1908

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 S.S. "Engie" (Number of Visits 14)

Master Boran Built at Govan By whom built Macfie & Thomson (N^o 378) Tons 1908

Engines made at Glasgow By whom made Houldie & Gillespie (N^o 86) when made 1908

Boilers made at Collochshaw By whom made A. & W. Dalglisk (N^o 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 screw shaft 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" 9" 1 special 2" 9" jetot In Holds, &c. Fish Room 1 - 2" fore peak 1 - 2"

No. of Bilge Injections 1 sizes 2" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room of 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 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 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 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

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Lloyd's Register Foundation

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. Gauldie & Lister Ltd

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 examined at Screw shaft 2.5.08 Propeller 23.4.08
 Stern tube 14.4.08 Steam pipes tested 23.5.08 Engine and boiler seatings working 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 Post. 1/4" F. Aps 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 ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 86
 Material of Steam Pipes Copper Test pressure 400 lbs per sq"

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
 ARR
 18/6/08

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

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

Committee's Minute GLASGOW 16 JUN. 1908

Assigned + L.M.C. 6.08
 subject

MACHINERY CERTIFICATE WRITTEN 14-10-09

TUES. 22 JUN 1909
 FRI. 14 AUG 1909
 Lloyd's Register Foundation
 FRI. 9 OCT 1909
 TUES. 12 OCT 1909

Certificate (if required) to be sent to the Surveyors and requested not to write on or below the space for Committee's Minute.