

REPORT ON MACHINERY.

No. 9591.
SAT. 4 JUL 1908

Received at London Office

Date of writing Report 2. 7. 1908 When handed in at Local Office 3. 7. 1908 Port of Aberdeen
 No. in Survey held at Aberdeen Date, First Survey 18. 3. 08 Last Survey 15. 6. 1908
 Reg. Book. on the steel S. S. Guerdon (Number of Visits 19) Tons { Gross 89.32
 Net 38.59
 Master A. Reid. Built at Aberdeen By whom built A. Hall & Co. Ld. When built 1908.
 Engines made at Aberdeen By whom made A. Hall & Co. Ld. when made 1908.
 Boilers made at do. By whom made do. when made 1908.
 Registered Horse Power 33 Owners John Boulton & Adam Reid. Port belonging to Kircaldy.
 Nom. Horse Power as per Section 28 33 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

ENGINES, &c.—Description of Engines Compound. No. of Cylinders 2. No. of Cranks 2.
 Dia. of Cylinders 13' 26" Length of Stroke 18" Revs. per minute 150 Dia. of Screw shaft 6" as per rule 5.84 Material of S.
 as fitted 6" screw shaft
 Is the 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
 in the 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
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners lapped & covered. Length of stern bush 23"
 Dia. of Tunnel shaft 5.11" as per rule 5.11 Dia. of Crank shaft journals 5.36" as per rule 5.36 Dia. of Crank pin 5.2" Size of Crank webs 10' x 3.3' Dia. of thrust shaft under
 collars 5.8" as fitted 5.36" Dia. of screw 6' 6" Pitch of Screw 9' 0" No. of Blades 3 State whether moveable no Total surface 16'
 No. of Feed pumps 1. Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 1. Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines one. Sizes of Pumps 4' x 2.2' x 4' duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room one of 2'. In Holds, &c. Fishhold one of 2'.
Also ejector drawing from all tanks, and with separate suction to engine room 2' dia.
 No. of Bilge Injections 1 sizes 2.4" Connected to condenser, or to circulating pump C.P. 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 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 Suction from fishhold. How are they protected Strong wood casing.
 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 25. 5. 08 of Stern Tube 25. 5. 08 Screw shaft and Propeller 25. 5. 08
 Is the Screw Shaft Tunnel watertight None. Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record (7)) Manufacturers of Steel The Elms & Co. Ld. D. Colville & Sons Ld.
 Total Heating Surface of Boilers 652' Is Forced Draft fitted no. No. and Description of Boilers One, Cyl. & mult. single ended.
 Working Pressure 120 lbs. Tested by hydraulic pressure to 240 lbs. Date of test 26. 5. 08. No. of Certificate 550.
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 24' No. and Description of Safety Valves to
 each boiler 2 Spring loaded. Area of each valve 3.98" Pressure to which they are adjusted 125 lbs. Are they fitted with easing gear yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork 4" Mean dia. of boilers 9' 9" Length 8' 6" Material of shell plates S.
 Thickness 5" Range of tensile strength 28-32 Are the shell plates welded or flanged no. Descrip. of riveting: cir. seams d. r. lap.
 long. seams double straps Diameter of rivet holes in long. seams 1.5" Pitch of rivets 5.8-2.76 Lap of plates or width of butt straps 10' x out 9.8"
 Per centages of strength of longitudinal joint rivets 96.0 Working pressure of shell by rules 122.9 Size of manhole in shell 16.2' x 12.2'
 plate 81.7 Size of compensating ring 28' dia x 1.6" No. and Description of Furnaces in each boiler 2: plain Material S. Outside diameter 34"
 Length of plain part 63" Thickness of plates 1.4" Description of longitudinal joint weld. No. of strengthening rings none.
 Working pressure of furnace by the rules 130. Combustion chamber plates: Material S. Thickness: Sides 1.6" Back 1.8" Top 1.6" Bottom 1.6"
 Pitch of stays to ditto: Sides 9' x 8" Back 10.4' x 10.8" Top 10.2' x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 130.
 Material of stays S. & S. Diameter at smallest part 1.2' full. Area supported by each stay 103.7' Working pressure by rules 129. End plates in steam space:
 Material S. Thickness 1.8" Pitch of stays 19' x 16" How are stays secured d. r. no. Working pressure by rules 123. Material of stays S.
 Diameter at smallest part 2.16' Area supported by each stay 285' Working pressure by rules 121. Material of Front plates at bottom S.
 Thickness 1.8" Material of Lower back plate S. Thickness 1.8" Greatest pitch of stays 12' x 12" Working pressure of plate by rules 183.
 Diameter of tubes 3.4' cat. Pitch of tubes 4.5' x 4.5" Material of tube plates S. Thickness: Front 1.8" Back 1.8" Mean pitch of stays 9"
 Pitch across wide water spaces 14.4' Working pressures by rules 142. Girders to Chamber tops: Material S. Depth and
 thickness of girder at centre 6' x 1.8" Length as per rule 24' Distance apart 10.2' Number and pitch of stays in each two. 8"
 Working pressure by rules 130. Superheater or Steam chest; how connected to boiler None. 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 _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Two top & 2 bottom end bolts & nuts; 2 main bearing & 1 set coupling bolts & nuts; 1 set each, Air, Circulating, Feed & Bilge pump valves; bolts & nuts assorted, & iron of various sizes.*

The foregoing is a correct description,

FOR ALEXANDER GILL & Co., Ltd.

Manufacturers of Main Engines & Boilers.

Dates of Survey while building { During progress of work in shops - - 1908 March 18, 24. April 3, 10, 13, 23, 28. May 7, 13, 16, 22, 25, 26, 28. June 5, 8, 9, 12, 15.
 { During erection on board vessel - -
 Total No. of visits 19

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders $\frac{28}{4}$ $\frac{7.16.22}{5}$ Slides $\frac{12}{5}$ Covers $\frac{16}{5}$ $\frac{5}{6}$ Pistons $\frac{7.16.22}{5}$ Rods $\frac{7.23.28}{5}$
 Connecting rods $\frac{7.23.28}{5}$ Crank shaft $\frac{14}{5}$ Thrust shaft $\frac{16}{5}$ Tunnel shafts $\frac{28}{4}$ $\frac{16}{5}$ Screw shaft $\frac{28}{4}$ $\frac{16}{5}$ Propeller $\frac{16.23}{5}$
 Stern tube $\frac{16.23.28}{5}$ Steam pipes tested $\frac{13}{6}$ Engine and boiler seatings $\frac{7.15}{4}$ Engines holding down bolts $\frac{9}{6}$
 Completion of pumping arrangements $\frac{13}{6}$ Boilers fixed $\frac{9}{6}$ Engines tried under steam $\frac{15}{6}$
 Main boiler safety valves adjusted $\frac{15}{6}$ Thickness of adjusting washers *Port $\frac{1}{16}$ Star $\frac{1}{16}$ full.*
 Material of Crank shaft *S & S* Identification Mark on Do. *132 (Lth)* Material of Thrust shaft *S* Identification Mark on Do. *132 (Lth)*
 Material of Tunnel shafts *I* Identification Marks on Do. *381 A* Material of Screw shafts *I* Identification Marks on Do. *382 A*
 Material of Steam Pipes *Copper solid drawn 3" bore No 8 B.M.E.* Test pressure *240 lbs per sq inch.*

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

These Engines, and the Boiler, have been constructed under Special Survey, and in accordance with the Secretary's letter, the Rules, and approved plan. The materials and workmanship, are good & efficient. When completed, and properly fitted on board, they were tried under steam at noonings with satisfactory results, and are now, in good working order, and in my opinion entitled to the record L.M.C. 6.08. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. 6.08.*

JHC. 6-7-08

JHC

6.7.08

Ridley Howell

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

The amount of Entry Fee. £ *1* : : When applied for, *3.7.08*
 Special £ *8* : :
 Donkey Boiler Fee £ : : When received, *3.9.08*
 Travelling Expenses (if any) £ : : *12/19/08*

Committee's Minute

JUL 7 1908

Assigned

+ L.M.C. 6.08

MACHINE WRITTEN



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Lloyd's Register Foundation

Aberdeen Office.

Certificate (if required) to be sent to the Committee's Minute.