

REPORT ON MACHINERY.

No. 50904

Port of Newcastle on Tyne Received at London Office MON. 11 JUN 1906
 No. in Survey held at S. Shields Date, first Survey Jan 10th 1906 Last Survey May 22nd 1906
 Reg. Book. S. S. "Lilian" (Number of Visits 12)
 Master G. J. G. G. Built at G. J. G. G. By whom built G. J. G. G. Tons { Gross 320
 Net 127
 When built 1906.5
 Engines made at S. Shields By whom made G. J. G. G. when made 1906.5
 Boilers made at do. By whom made J. J. C. C. when made 1906
 Registered Horse Power 71 Owners Wickescombe Shipping Co Ltd Port belonging to Humworth
 Nom. Horse Power as per Section 28 71 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 18" - 36" Length of Stroke 24" Revs. per minute 7.52 Dia. of Screw shaft 7.52 Material of 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 If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2' - 8"
 Dia. of Tunnel shaft 7.375 as per rule 7.52 Dia. of Crank shaft journals 7.52 as per rule 7.52 Dia. of Crank pin 7.52 Size of Crank webs 14 1/4 x 5 Dia. of thrust shaft under
 collars 7.625 Dia. of screw 8' - 9" Pitch of Screw 12' - 0" No. of Blades 4 State whether moveable No Total surface 30 Sq. Ft.
 No. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 13" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/8" Stroke 13" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines One Sizes of Pumps 5 1/4 x 3 1/2 x 5 Dup. No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" Bore. In Holds, &c. Five 1 1/2" 3" Five 1 1/2" 2 1/2"

No. of Bilge Injections 1 sizes 3 1/4" 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 10.4.06 of Stern Tube 10.4.06 Screw shaft and Propeller 10.4.06
 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 Man Bore Is Forced Draft fitted Yes No. and Description of Boilers Man Bore
 Working Pressure Man Bore Tested by hydraulic pressure to Man Bore Date of test Man Bore No. of Certificate Man Bore
 Can each boiler be worked separately Man Bore Area of fire grate in each boiler Man Bore No. and Description of Safety Valves to
 each boiler Man Bore Area of each valve Man Bore Pressure to which they are adjusted Man Bore Are they fitted with easing gear Man Bore
 Smallest distance between boilers or uptakes and bunkers or woodwork Man Bore Mean dia. of boilers Man Bore Length Man Bore Material of shell plates Man Bore
 Thickness Man Bore Range of tensile strength Man Bore Are the shell plates welded or flanged Man Bore Descrip. of riveting: cir. seams Man Bore
 long. seams Man Bore Diameter of rivet holes in long. seams Man Bore Pitch of rivets Man Bore Lap of plates or width of butt straps Man Bore
 Per centages of strength of longitudinal joint Man Bore Working pressure of shell by rules Man Bore Size of manhole in shell Man Bore
 Size of compensating ring Man Bore No. and Description of Furnaces in each boiler Man Bore Material Man Bore Outside diameter Man Bore
 Length of plain part Man Bore Thickness of plates Man Bore Description of longitudinal joint Man Bore No. of strengthening rings Man Bore
 Working pressure of furnace by the rules Man Bore Combustion chamber plates: Material Man Bore Thickness: Sides Man Bore Back Man Bore Top Man Bore Bottom Man Bore
 Pitch of stays to ditto: Sides Man Bore Back Man Bore Top Man Bore If stays are fitted with nuts or riveted heads Man Bore Working pressure by rules Man Bore
 Material of stays Man Bore Diameter at smallest part Man Bore Area supported by each stay Man Bore Working pressure by rules Man Bore End plates in steam space: Man Bore
 Material Man Bore Thickness Man Bore Pitch of stays Man Bore How are stays secured Man Bore Working pressure by rules Man Bore Material of stays Man Bore
 Diameter at smallest part Man Bore Area supported by each stay Man Bore Working pressure by rules Man Bore Material of Front plates at bottom Man Bore
 Thickness Man Bore Material of Lower back plate Man Bore Thickness Man Bore Greatest pitch of stays Man Bore Working pressure of plate by rules Man Bore
 Diameter of tubes Man Bore Pitch of tubes Man Bore Material of tube plates Man Bore Thickness: Front Man Bore Back Man Bore Mean pitch of stays Man Bore
 Pitch across wide water spaces Man Bore Working pressures by rules Man Bore Girders to Chamber tops Man Bore Material Man Bore Depth and
 thickness of girder at centre Man Bore Length as per rule Man Bore Distance apart Man Bore Number and pitch of stays in each Man Bore
 Working pressure by rules Man Bore Superheater or Steam chest; how connected to boiler Man Bore Can the superheater be shut off and the boiler worked
 separately Man Bore Diameter Man Bore Length Man Bore Thickness of shell plates Man Bore Material Man Bore Description of longitudinal joint Man Bore Diam. of rivet
 holes Man Bore Pitch of rivets Man Bore Working pressure of shell by rules Man Bore Diameter of flue Man Bore Material of flue plates Man Bore Thickness Man Bore
 If stiffened with rings Man Bore Distance between rings Man Bore Working pressure by rules Man Bore End plates: Thickness Man Bore How stayed Man Bore
 Working pressure of end plates Man Bore Area of safety valves to superheater Man Bore Are they fitted with easing gear Man Bore

8920-56013

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: — 2. Main Bearing Bolts. 2 Sp and end 2. Bolts and Bolts. One set Pump Bolts. One set Piston Bolts. One set each Pump valves. One Propeller

The foregoing is a correct description,

G. J. Grey Engine Builder

Manufacturer.

Dates of Survey { During progress of work in shops - 1906 Jan 12, Feb 6, 16, Mar 8, 16, Apr 3, May 27.
During erection on board vessel - Apr 10, May 1, 22.
Total No. of visits 12

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

Dates of Examination of principal parts—Cylinders 10-1-06 Slides 4-4-06 Covers 4-4-06 Pistons 4-4-06 Rods 4-4-06
Connecting rods 4-4-06 Crank shaft *made & finished at date* Thrust shaft _____ Tunnel shafts *home* Screw shaft 4-4-06 Propeller 4-4-06
Stern tube 3-3-06 Steam pipes tested 10-5-06 Engine and boiler seatings 7-5-06 Engines holding down bolts 7-5-06
Completion of pumping arrangements 12-5-06 Boilers fixed 12-5-06 Engines tried under steam 12-5-06
Main boiler safety valves adjusted 12-5-06 Thickness of adjusting washers *P. 7/16 f. 5 1/4 f.*
Material of Crank shaft *I.* Identification Mark on Do. *1666 G.A.H.* Material of Thrust shaft *1666 I.* Identification Mark on Do. *1666 G.H.*
Material of Tunnel shafts *home* Identification Marks on Do. *✓* Material of Screw shafts *I.* Identification Marks on Do. *1666 G.T.*
Material of Steam Pipes *Copper.* Test pressure *260 lbs. 0"*

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery constructed under special survey. The material and workmanship being sound and efficient is eligible in my opinion for record. + L.M.C. 5.06*)

It is submitted that this vessel is eligible for THE RECORD L.M.C. 5.06

11.6.06

The amount of Entry Fee. £ 1 : : : When applied for.
Special .. £ 10 : 13 : 17 MAY 1906
Donkey Boiler Fee .. £ : : :
Travelling Expenses (if any) £ : : : When received.
11.6.06

Committee's Minute

TUES. JUN 12 1906

Assigned

E. A. Dryden Joyce

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

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MACHINERY CERTIFICATE WRITTEN.