

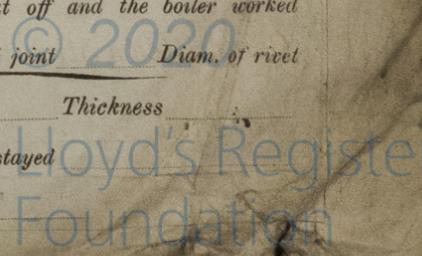
# REPORT ON MACHINERY

No. 50360  
APL 1906  
TUES. 3 APL 1906

Port of Newcastle-on-Tyne  
 Reg. Book. South Shields Date, first Survey Nov. 7 Last Survey 20<sup>th</sup> March 1906  
 No. in Survey held at 53 (Number of Visits 25)  
 Master S.S. EVELYN Built at Goole By whom built Goole Shipbuilding Co. Tons { Gross 235 Net 74  
 Engines made at South Shields By whom made G. J. Grey when made 1906  
 Boilers made at South Shields By whom made J. J. Eltringham when made 1906  
 Registered Horse Power \_\_\_\_\_ Owners J. Marr & Sons Port belonging to Fleetwood  
 Nom. Horse Power as per Section 28 69.4 Is Refrigerating Machinery fitted No Is Electric Light fitted No

**ENGINES, &c.**—Description of Engines Tri-compound No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 12 1/4 - 21 - 33 Length of Stroke 24 Revs. per minute \_\_\_\_\_ Dia. of Screw shaft 4 1/2 Material of screw shaft 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 \_\_\_\_\_ 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 Fitting  
 If two liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Length of stern bush 2'-6"  
 Dia. of Tunnel shaft 6.305 Dia. of Crank shaft journals 6.62 Dia. of Crank pin 6 5/8 Size of Crank webs 1 1/2 x 4 1/8 Dia. of thrust shaft under collars 6 7/8 Dia. of screw 8-6 Pitch of screw 10-6 No. of blades 4 State whether moveable No Total surface 28 sq  
 No. of Feed pumps 1 Diameter of ditto 2 1/4 Stroke 13 1/2 Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Bilge pumps 1 Diameter of ditto 2 3/4 Stroke 13 1/2 Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Donkey Engines 2 Sizes of Pumps 4 1/2 x 2 1/4 x 4 No. and size of Suctions connected to both Bilge and Donkey pumps 5 1/4 x 3 1/2 x 5  
 In Engine Room One of 2" In Holds, &c. 1 of 2" After flush tank 1 of 2 1/2" Ford. Slush tank 1 of 2 1/2" in fish tank  
 No. of bilge injections 1 sizes 2 3/4 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 \_\_\_\_\_  
 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  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock New Road Is the screw shaft tunnel watertight Engine off  
 Is it fitted with a watertight door Yes worked from \_\_\_\_\_

**BOILERS, &c.**— (Letter for record 5) Total Heating Surface of Boilers 1250 sq 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 14-2-05 Can each boiler be worked separately Yes Area of fire grate in each boiler 33.5 sq No. and Description of safety valves to each boiler Two spring loaded Area of each valve 3.976 sq 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 17" Mean dia. of boilers 12'-3" Length 10'-0" Material of shell plates Steel  
 Thickness 1 1/8" Range of tensile strength 282-32 Are they welded or flanged No Descrip. of riveting: cir. seams double long. seams quintuple  
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6 1/4" Lap of plates or width of butt straps 12 3/8"  
 Per centages of strength of longitudinal joint: rivets 83% plate 82% Working pressure of shell by rules 180 lbs Size of manhole in shell \_\_\_\_\_  
 Size of compensating ring \_\_\_\_\_ No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 44"  
 Length of plain part: top 70 1/2" bottom \_\_\_\_\_ Thickness of plates: crown 4.9" bottom 6.4" Description of longitudinal joint riveted No. of strengthening rings one rivet  
 Working pressure of furnace by the rules 181 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 2 1/32" Top 1/16" Bottom 4 9/64"  
 Pitch of stays to ditto: Sides 9 3/4" x 9 3/8" Back 9 1/4" x 8 1/2" Top 9 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads None Working pressure by rules 181 lbs  
 Material of stays Steel Diameter at smallest part 1 1/32" Area supported by each stay 90 sq Working pressure by rules 197 lbs End plates in steam space: Material Steel Thickness 1 3/32" Pitch of stays 16 1/2" x 16 1/2" How are stays secured By nuts Working pressure by rules 181 lbs Material of stays Steel  
 Diameter at smallest part 2 3/32" Area supported by each stay 276 sq Working pressure by rules 182 lbs Material of Front plates at bottom Steel  
 Thickness 1 1/16" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 14 1/2" x 9 1/2" Working pressure of plate by rules 183 lbs  
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 1 1/32" x 9/16" Back 7/8" Mean pitch of stays 14 1/2"  
 Pitch across wide water spaces 14 1/2" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2" x 1 1/2" Length as per rule 2-8 1/2" Distance apart 9 1/2" Number and pitch of Stays in each Two 9 1/2"  
 Working pressure by rules 188 lbs 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 \_\_\_\_\_



**DONKEY BOILER—** No. Description

Made at By whom made When made Where fixed  
 Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves  
 No. of safety valves Area of each Pressure to which they are adjusted If fitted with casing 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 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  
 Thickness of furnace crown plates Staged by Working pressure of shell by rules  
 Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— 2 Top end, 2 bottom end, 2 main bearing bolts & nuts, 1 set coupling bolts & nuts, 1 set Piston bolts, 1 set feed, bilge, air & circ. pump valves, 1 propeller, 1 main & 1 donkey check valve

The foregoing is a correct description,

Jos. D. Cunningham & Co. Manufacturer of Engines

Wm. G. Grey & Co. Manufacturer of Engines

Dates of Survey while building } During progress of work in shops - 1905: Nov. 10, 17, 24. Dec. 1, 21. 1906: Jan. 10, 26. Feb. 6, 16. March 12, 16, 20.  
 } During erection on board vessel - 1905: Nov. 7, 30. Dec. 6, 20. 1906: Jan. 5, 10, 12, 16, 22, 25, 31. Feb. 5, 7, 14.  
 Total No. of visits 25

Is the approved plan of main boiler forwarded herewith

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel, has been built under special survey & in our opinion is eligible for record  $\text{L.M.C. 3.06}$

It is submitted that this vessel is eligible for THE RECORD  $\text{L.M.C. 3.06}$ .

Wm. G. Grey & Co.  
 £ 3.4.06

Newcastle-on-Tyne.

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

The amount of Entry Fee... £ 1 : : : When applied for, 27 MAR 1906  
 Special ... £ 10 : 7 : : :  
 Donkey Boiler Fee ... £ : : : : : When received, 2.4.06  
 Travelling Expenses (if any) £ : : : : :

Wm. G. Grey & Co. Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI 6 APR 1906

Assigned

+ L.M.C. 3.06

