

REPORT ON MACHINERY.

Hull

Port of *Newcastle-on-Tyne*

Received at London Office *MAR 10 1906*

No. in Survey held at *South Shields*

Date, first Survey *Nov 7*

Last Survey *Feb 19* 1906

Reg. Book, *55* on the *S.S. TRITON*

(Number of Visits *25*)

Tons { Gross *207*
Net *59*

Master Built at *Gool*

By whom built *Gool Shbr. & Repg. Co. Ltd*

When built *1906*

Engines made at *South Shields* By whom made *C. J. Grey*

when made *1906*

Boilers made at *"* By whom made *J. Y. Etringham & Sons*

when made *1906*

Registered Horse Power *69.5* Owners *Capt. Wales*

Port belonging to *Swansea*

Nom. Horse Power as per Section 28 *69.5* Is Refrigerating Machinery fitted *No*

Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines

Tre-compound

No. of Cylinders *3*

No. of Cranks *3*

Dia. of Cylinders *12-21-33* Length of Stroke *24* Revs. per minute

Dia. of Screw shaft *7.5* as per rule *7.5* as fitted *7.5*

Material of screw shaft *Iron scrap*

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 *Painted* Length of stern bush *2'-7"*

Dia. of Tunnel shaft *6.5* as per rule *6.5* as fitted *6.5* Dia. of Crank shaft journals *6.5* as per rule *6.5* as fitted *6.5* Dia. of Crank pin *6.5* Size of Crank webs *4/8 x 12/8* Dia. of thrust shaft under collars *6.5* Dia. of screw *8-6* Pitch of screw *10-6* No. of blades *4* State whether moveable *No* Total surface *26 sq ft*

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 *5 x 3 1/2 x 6" Super* No. and size of Suctions connected to both Bilge and Donkey pumps *7" x 3 1/2" x 6" Feed*

In Engine Room *One of 2" & Episton* In Holds, &c. *7 inch with 1 of 2 1/2" diam*

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 *No*

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 Year* Is the screw shaft tunnel watertight *No tunnel*

Is it fitted with a watertight door *✓* ~~worked from~~ *Engines Aft*

BOILERS, &c.—*1508* (Letter for record *14*) Total Heating Surface of Boilers *1203 sq ft* Is forced draft fitted *No*

No. and Description of Boilers *One single ended multitubular* Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs*

Date of test *26.1.05* Can each boiler be worked separately *✓* Area of fire grate in each boiler *33 sq ft* No. and Description of safety valves to each boiler *Two spring loaded* Area of each valve *3.97* 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 *9"* Mean dia. of boilers *12'-0"* Length *10'-0"* Material of shell plates *Steel*

Thickness *3/32"* Range of tensile strength *28-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *double* long. seams *Quintuple*

Diameter of rivet holes in long. seams *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 *86%* Working pressure of shell by rules *184 lbs* Size of manhole in shell *16" x 12"*

Size of compensating ring *7 1/2" x 1 3/32"* No. and Description of Furnaces in each boiler *2 plain* Material *steel* Outside diameter *43"*

Length of plain part *73"* Thickness of plates crown *49"* Description of longitudinal joint *double butt straps* No. of strengthening rings *12*

Working pressure of furnace by the rules *182 lbs* Combustion chamber plates: Material *steel* Thickness: Sides *21/32"* Back *11/16"* Top *21/32"* Bottom *11/16"*

Pitch of stays to ditto: Sides *9" x 9 1/8"* Back *9" x 8"* Top *9" x 8 1/4"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *180 lbs*

Material of stays *Iron* Diameter at smallest part *1 19/32"* Area supported by each stay *82 sq in* Working pressure by rules *210 lbs* End plates in steam space:

Material *steel* Thickness *1"* Pitch of stays *16"* How are stays secured *Iron* Working pressure by rules *185 lbs* Material of stays *steel*

Diameter at smallest part *2 17/32"* Area supported by each stay *256 sq in* Working pressure by rules *197 lbs* Material of Front plates at bottom *steel*

Thickness *15/16"* Material of Lower back plate *steel* Thickness *7/8"* Greatest pitch of stays *14"* Working pressure of plate by rules *187 lbs*

Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4"* Material of tube plates *steel* Thickness: Front *1"* Back *7/8"* Mean pitch of stays *11 7/8"*

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 *5 7/8" x 2 1/16"* Length as per rule *2'-5"* Distance apart *8 1/4"* Number and pitch of Stays in each *two 9"*

Working pressure by rules *182 lbs* 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 stays 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

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

J. Y. Etringham & Co's Boiler Works

Lloyd's Register Foundation
W 1586-0261

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 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 _____ 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 _____ Stayed 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:— *Two top end, 2 bottom end, 2 main bearing bolts, 1 set coupling bolts, 1 set Piston bolts, 1 set air, air, feed & bilge pumps, 1 main & 1 donkey check valves & 1 propeller*

The foregoing is a correct description,
Jos. D. Edgingham & Co Manufacturers of Boilers
Henry Doe

J. T. Grey Manufacturer of Engines

Dates of Survey while building

| | | | |
|--|---|--|-------------|
| During progress of work in shops - - During erection on board vessel - - Total No. of visits | } ENG. 1906. Nov. 10. 17. 24. Dec. 8. 21. 1906. Jan. 10. 26. Feb. 6. 9. 19. } B. G. 1906. Nov. 7. 24. Dec. 6. 20. 1906. Jan. 5. 10. 12. 16. 22. 25. 26. Feb. 5. 9. | Is the approved plan of main boiler forwarded herewith | Yes |
| | | " " " donkey " | " " " " " ✓ |

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 F.L.M.C. 2.06

It is submitted that this vessel is eligible for THE RECORD F.L.M.C. 2.06.

R.S.
 19.3.06
R.S.
 19.3.06

Hewcastle-on-Tyne.

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

| | | |
|--|-------------|--|
| The amount of Entry Fee. | £ 1 : . . . | When applied for, - 1 MAR 1906 as per advice When received, 10/3/1906 Lou. |
| Special | £ 10 : 4 : | |
| Donkey Boiler Fee | £ . : . . . | |
| Travelling Expenses (if any) £ | £ . : . . . | |

G. D. Dryden, Joyner & Graham
 Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned
 TUES. 20 MAR 1906
 + L.M.C. 2.06

MACHINERY CERTIFICATE WRITTEN.

