

Rpt. 4.

REPORT ON MACHINERY.

Hull Rpt. No. 17663.

No. 50.152.

Hull
Port of *Newcastle-on-Tyne*
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*)
Master *Gool* Built at *Gool* By whom built *Gool Shbr. & Repg. Co. Ltd* Tons { Gross *207*
Engines made at *South Shields* By whom made *G. T. Grey* when made *1906* Net *59*
Boilers made at *"* By whom made *J. Y. Eltringham & Sons* when made *1906*
Registered Horse Power *60* Owners *Capt. Wales* Port belonging to *Swansea*
Nom. Horse Power as per Section 28 *60* 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 *12-21-33* Length of Stroke *24* Revs. per minute *7.5* Dia. of Screw shaft *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 *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 *Painted* Length of stern bush *2'-7"*
Dia. of Tunnel shaft *6.56* as per rule *6.56* Dia. of Crank shaft journals *6.56* as per rule *6.56* Dia. of Crank pin *6.56* Size of Crank webs *4 1/2 x 12 1/2* Dia. of thrust shaft under
collars *6 1/8* 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 *Yes*
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 *Yes*
No. of Donkey Engines *2* Sizes of Pumps *5 x 3 1/2 x 6" Supper* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *One of 2" & Epictor 5 x 3 1/2 x 6" 7" 7"* In Holds, &c. *7 inch hold 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 *4" 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 *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*
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 *Yes* *worked from Engines Aft*

BOILERS, &c.—

(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 *Yes* 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 *1 3/32* Range of tensile strength *284-32* 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 *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 *49"* Description of longitudinal joint *double butt straps* No. of strengthening rings *none*
Working pressure of furnace by the rules *182 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *3/32"* Back *1/16"* Top *3/32"* Bottom *3/32"*
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 1/32"* 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 1/32"* Area supported by each stay *256 sq in* Working pressure by rules *197 lbs* Material of Front plates at bottom *Steel*
Thickness *1 5/16"* Material of Lower back plate *Steel* Thickness *7/8"* Greatest pitch of stays *1/4"* 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 *1 1/8"*
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 *Yes* Diameter *18"* Length *18"* Thickness of shell plates *1/8"* Material *Steel* Description of longitudinal joint *Double butt* Diam. of rivet
holes *1 1/8"* Pitch of rivets *6 1/4"* Working pressure of shell by rules *184 lbs* Diameter of flue *18"* Material of flue plates *Steel* Thickness *1/8"*
If stiffened with rings *Yes* Distance between stays *16"* Working pressure by rules *185 lbs* End plates: Thickness *1"* How stayed *Iron*
Working pressure of end plates *187 lbs* Area of safety valves to superheater *182 lbs* Are they fitted with easing gear *Yes*

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. Cunningham *Henry Dugg* *J. T. Grey* *W. Bell*
 Manufacturers of Boilers Manufacturers of Engines

Dates of Survey while building { During progress of work in shops— *ENG. 1906. Nov. 10. 17. 24. Dec. 8. 21. 1906. Jan. 10. 26. Feb. 6. 9. 19.*
 { During erection on board vessel — *B. G. 1906. Nov. 7. 24. Dec. 6. 20. 1906. Jan. 5. 10. 22. 25. 26. Feb. 5. 9.*
 Total No. of visits *23* 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.

W.S.
19.3.06
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19.3.06

Revised on - Type.

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

The amount of Entry Fee. £ 1 : : :
 Special £ 10 : 4 :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, *1 MAR 1906*
 as per advice *10/3/06*
 When received, *19.3.06*

G. A. Dryden Jones & A. S. 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.