

REPORT ON MACHINERY.

SLD955-0093

No. 114390

Port of Sunderland

TRUD 22

No. in Survey held at Sunderland
Reg. Book.

Date, first Survey 20th May/87 Last Survey 16th Sept 1887
(Number of Visits 23)

on the Screw Steamer "Galatea" Tons 347
Master M^r Lumley Built at Sunderland By whom built the Sunderland Shipbuilding Co When built 1887

Engines made at Sunderland By whom made N. E. Marine. E. Coy when made 1887
Boilers made at D^o By whom made D^o when made 1887

Registered Horse Power 95 Owners Leach & Co Port belonging to London

ENGINES, &c.—

Description of Engines Triple expansion, with 3 Cyls and 3 Cranks.
Diameter of Cylinders 16.26 & 4.3 Length of Stroke 30 No. of Rev. per minute 75 Point of Cut off, High Pressure 5th Low Pressure 5th
Diameter of Screw shaft 7³/₄ Diam. of Tunnel shaft 7³/₄ Diam. of Crank shaft journals 7³/₄ Diam. of Crank pin 7³/₄ size of Crank webs 9x5¹/₂
Diameter of screw 11-0 Pitch of screw 13.6 No. of blades 4 state whether moveable no total surface 36 sq. ft
No. of Feed pumps 2 diameter of ditto 2 Stroke 30 Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 diameter of ditto 3 Stroke 30 Can one be overhauled while the other is at work yes
Where do they pump from the bilges of the engine room, aft well & fore hold.
No. of Donkey Engines one Size of Pumps 3 dia x 6 stroke Where do they pump from the sea tanks, and bilges of the engine room, aft well and fore hold.

Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes
No. of bilge injections 1 and sizes 3 dia Are they connected to condenser, or to circulating pump to Circulating pump
How are the pumps worked direct from the piston rod Crossheads
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 below
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 accessible at all times yes
Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
When were stern tube, propeller, screw shaft, and all connections examined in dry dock new

BOILERS, &c.—

Number of Boilers one Description Qyl. & Multitubular Whether Steel or Iron steel
Working Pressure 150 lbs Tested by hydraulic pressure to 300 lbs Date of test 20th Aug 1887
Description of superheating apparatus or steam chest none
Can each boiler be worked separately fully Can the superheater be shut off and the boiler worked separately no superheater.
No. of square feet of fire grate surface in each boiler 45 Description of safety valves spring No. to each boiler 2
Area of each valve 7 Hms Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —
Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 9" Diameter of boiler 12.0
Length of boilers 10.6 description of riveting of shell long. seams tube riv butt circum. seams double weld Thickness of shell plates 1¹/₂
Diameter of rivet holes 1¹/₂ whether punched or drilled drilled pitch of rivets 4³/₄ Lap of plating 14 straps
Per centage of strength of longitudinal joint 77.6 working pressure of shell by rules 150 lbs size of manholes in shell 16x12
Size of compensating rings 6x1 No. of Furnaces in each boiler 3
Outside diameter 3.0 length, top 6.6 bottom 6.6 thickness of plates 1¹/₂ description of joint welded, fluted if rings are fitted none
Greatest length between rings — working pressure of furnace by the rules 166 combustion chamber plating, thickness, sides 9¹/₂ back 9¹/₂ top 9¹/₂
Pitch of stays to ditto, sides 8x7¹/₂ back 7¹/₂x7¹/₂ top 7¹/₂x7¹/₂ If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 151 lbs Diameter of stays at smallest part 1¹/₂ working pressure of ditto by rules 172 lbs end plates in steam space, thickness 1¹/₂
Pitch of stays to ditto 15³/₈x15³/₈ how stays are secured nuts working pressure by rules 150 lbs diameter of stays at smallest part 2⁵/₂ working pressure by rules 175 lbs Front plates at bottom, thickness 3¹/₄ Back plates, thickness 1¹/₂
Greatest pitch of stays 11¹/₂x7¹/₂ working pressure by rules 153 lbs Diameter of tubes 3¹/₄ pitch of tubes 4¹/₂x4¹/₂ thickness of tube plates, front 1¹/₂ back 3¹/₄ how stayed stay tube pitch of stays 9x9 width of water spaces 1¹/₂
Diameter of Superheater or Steam chest none length — thickness of plates — description of longitudinal joint — diam. of rivet holes —
Pitch of rivets — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —
Distance between rings — working pressure by rules — end plates of superheater, or steam chest; thickness — how stayed —
Superheater or steam chest; how connected to boiler —

DONKEY BOILER— Description *Vertical, 3 Cross tubes.*
Made at *Newcastle* by whom made *Type Boiler works Co* when made *26.8.87* where fixed *in M*
Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs* No. of Certificate *2322* fire grate area *18 sq ft* desc
valves *spring* No. of safety valves *2* area of each *4.9 sq in* if fitted with easing gear *yes* if steam from
enter the donkey boiler *no* diameter of donkey boiler *5.6* length *10.0* description of riveting *double row*
Thickness of shell plates *13/32* diameter of rivet holes *13/16* whether punched or drilled *punched* pitch of rivets *3* lap of
per centage of strength of joint *72.3* thickness of crown plates *9/16* stayed by *6 stays 1 5/8*
Diameter of furnace, top *4.3 7/8* bottom *4.11* length of furnace *4.6* thickness of plates *1/2* description of joint *Lap. en*
Thickness of furnace crown plates *1/2* stayed by *as above* working pressure of shell by rules
Working pressure of furnace by rules *3 rows of stays 74 lb* diameter of uptake *1 1/4* thickness of plates *3/8* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *1 propeller, 2 Main bearing bolts, 1 set of Coupling bolts & nuts, 1 set of Connecting rod bolts & nuts, 1 set of Feed and bilge pump valves, bolts nuts and iron assorted.*

The foregoing is a correct description, *no* Except of the Donkey Boiler.
Wm. Allison Manufacturer.

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

The Machinery of this vessel has been constructed under special survey the Materials and workmanship are good and efficient.
The Engines and Boilers have been tried under steam, and in my opinion are in good order and safe working condition, and eligible for the distinguishing mark L.M.C. 9. 87. in the Register Book of this Society.

The amount of Entry Fee .. £ *1* : — : — *not yet* received by me,
Special .. £ *14* : *5* : —
Donkey Boiler Fee .. £ — : — : —
Certificate (if required) .. £ — : — : — *22/9/1887*
To be sent as per margin. *5. 1/4*

(Travelling Expenses, if any, £ —)

Committee's Minute

TUESDAY 27 SEPT 1887

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

Lloyd's Register
Foundation