

REPORT ON MACHINERY.

SLD955-0093

No. 114390 Port of Sunderland Received at London Office 22
 No. in Survey held at Sunderland Date, first Survey 20th May/87 Last Survey 16th Sept 1887
 Reg. Book. on the Screw Steamer "Galatea" (Number of Visits 23) Tons 347
559
 Master M^r Lumley Built at Sunderland By whom built The Sunderland Shipbuilding Co^y When built 1887
 Engines made at Sunderland By whom made N. C. 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^y 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/₈ Low Pressure 5th/₈
 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 9 x 5¹/₂
 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
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform of engine room

BOILERS, &c.—

Number of Boilers one Description Cyl. & 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 only 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 74 ins 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 double riv. butt circum. seams double riv. lap Thickness of shell plates 1³/₁₆
 Diameter of rivet holes 1⁷/₁₆ whether punched or drilled drilled pitch of rivets 4³/₄ Lap of plating 14 straps
 Percentage of strength of longitudinal joint 77.6 working pressure of shell by rules 150 lbs size of manholes in shell 16 x 12
 Size of compensating rings 6 x 1 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 9¹/₁₆ back 9¹/₁₆ top 9¹/₁₆
 Pitch of stays to ditto, sides 8 x 7¹/₂ back 7¹/₂ x 7¹/₂ top 7¹/₂ x 7¹/₂ If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 151 lbs
 Diameter of stays at smallest part 1⁵/₁₆ working pressure of ditto by rules 172 lbs end plates in steam space, thickness 1⁵/₁₆
 Pitch of stays to ditto 15³/₈ x 15³/₈ how stays are secured nuts working pressure by rules 150 lbs diameter of stays at smallest part 2⁵/₃₂
 working pressure by rules 175 lbs Front plates at bottom, thickness 3¹/₄ Back plates, thickness 1³/₁₆
 Greatest pitch of stays 11¹/₂ x 7¹/₂ working pressure by rules 153 lbs Diameter of tubes 3¹/₄ pitch of tubes 4¹/₂ x 4¹/₂ thickness of tube plates, front 1³/₁₆ back 3¹/₄
 how stayed stay tube pitch of stays 9 x 9 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 the*
 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. joint*
 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 Easton Marine Engineer Manufacturer.
J.H. Iron

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* received by me,
 Special £ *14* : *5* : —
 Donkey Boiler Fee £ — : — : —
 Certificate (if required) .. £ — : — : — *22/9/1887*
 To be sent as per margin. *S. M.*
 (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