

REPORT ON MACHINERY.

5369

No. in Survey held at Bull Date, first Survey Nov^r 9th 82 Last Survey 17 August 1883
 Book. on the iron Steam Ship "Saint Thome" (Number of Visits 24)
 Scantlings of Material Built at Bull By whom built Charles S. B. & Co. (Lm^d) When built 1883
 Lines made at Bull By whom made Charles S. when made 1883
 Deck made at d. By whom made d. when made 1883
 Registered Horse Power 250 Owners Empresa Nacional Port belonging to Lisbon

Received at London Office Rec'd 20th AUGUST, 1883

MACHINES, &c.—

Description of Engines Vertical inverted compound Surface condensing
 Diameter of Cylinders 21 40 7/4 Length of Stroke 48 No. of Rev. per minute 58 Point of Cut off, High Pressure 29 Low Pressure 29
 Diameter of Screw shaft 13 3/8 Diam. of Tunnel shaft 12 1/2 Diam. of Crank shaft journals 13 3/4 Diam. of Crank pins 13 3/4 size of Crank webs 9 1/4 x 15 1/2
 Diameter of screw 17.0 Pitch of screw 21.0 No. of blades 4 state whether moveable yes total surface 72.24 feet
 Feed pumps 2 diameter of ditto 4 Stroke 36 Can one be overhauled while the other is at work yes
 Bilge pumps 2 diameter of ditto 5 Stroke 36 Can one be overhauled while the other is at work yes
 Do they pump from Main compartments & one from the sea with a deck delivery
 Donkey Engines 2 Size of Pumps Ballast 8 x 8 stroke feed 5 x 8 Where do they pump from The ballast engine from the tanks sea and the engine room bilges with delivery overboard through the condenser the feed donkey from the sea the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible no bilge injections one and sizes 5/4 non return Are they connected to condenser, or to circulating pump to circulating pump Are the pumps worked by rocking levers from piston rod crossheads 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 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 pipes are carried through the bunkers the system of bilge pumps How are they protected rod and cap pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes in engine room pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes stern tube, propeller, screw shaft, and all connections examined in dry dock non new (sighted on launch ways 21 June 83) screw shaft tunnel watertight reputed and fitted with a sluice door yes worked from upper platform

BOILERS, &c.—

No. of Boilers Two Description circular, multitubular Whether Steel or Iron Steel
 Pressure 80 lb Tested by hydraulic pressure to 160 lb Date of test 21st, 23rd & 26 June 83
 Description of superheating apparatus or steam chest none fitted
 Can the boiler be worked separately yes Can the superheater be shut off and the boiler worked separately it
 Area of fire grate surface in each boiler 73.24 Description of safety valves Spring loaded No. to each boiler Two
 Are they fitted with easing gear yes No. of safety valves to superheater x area of each valve it
 Are they fitted with easing gear x Smallest distance between boilers and bunkers 6 inches Diameter of boilers 13.0
 Diameter of shell 16.6 description of riveting of shell long. seams double riv' butts circum. seams double riv' laps Thickness of shell plates 3/4
 Diameter of rivet holes 15/16 whether punched or drilled drilled pitch of rivets long 3 3/8 Lap of plating 9/2 straps
 Working pressure of longitudinal joint 72 working pressure of shell by rules 86 lb size of manholes in shell 16' x 12'
 Diameter of compensating rings 28" x 24" x 3/4" No. of Furnaces in each boiler 4
 Diameter of boiler 45' length, top 6.0 bottom 16.0 thickness of plates 17/32 description of joint butted with double straps rings are fitted arc at back and
 Distance between rings 6.0 working pressure of furnace by the rules 93 lb combustion chamber plating, thickness, sides 1/2 back x top 1/2
 Distance to ditto, sides 8 1/2 to 9 1/2 back x top 8 1/2 If stays are fitted with nuts or riveted heads nut working pressure of plating by rule
 Diameter of stays at smallest part 1 7/8 working pressure of ditto by rules 140 end plates in steam space, thickness 3/4
 Diameter of stays 1 7/8 how stays are secured double nuts washers working pressure by rules 80 lb & 84 lb diameter of stays at rule
 Diameter of front plates at bottom, thickness 7/8 Back plates, thickness x
 Diameter of stays x working pressure by rules x Diameter of tubes 3 1/2 pitch of tubes 4 7/8 thickness of tube 1/8
 Diameter of back 1 1/16 how stayed stay tubes pitch of stays 1 3/2 in mid width of water spaces 1/8
 Diameter of British and superheater or Steam chest length thickness of plates description of longitudinal joint diam. of rivet holes
 Working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings
 Working pressure by rules end plates of superheater, or steam chest; thickness how stayed
 Superheater or steam chest; how connected to boiler none fitted

Lloyd's Register Foundation 110396-0117

DONKEY BOILER— Description *Circular, multitubular with dry comb chamber + 2 internal furnaces*

Made at *Hull* by whom made *Charles C.* when made *1883* where fixed *on deck*

Working pressure *4 1/2* tested by hydraulic pressure to *90* No. of Certificate *148* fire grate area *13 sq. ft.* description of safety

valves *Spring loaded* No. of safety valves *one* area of each *7 sq. in.* if fitted with easing gear *if steam from main boilers can*

enter the donkey boiler *no* diameter of donkey boiler *8' 0"* length *5' 7 1/2"* description of riveting *long. abt riveted lap*

Thickness of shell plates *7/16 in* diameter of rivet holes *13/16"* whether punched or drilled *long drilled* pitch of rivets *2 1/4"* lap of plating *4"*

per centage of strength of joint *70* thickness of ^{end plates in steam space} ~~cross~~ plates *7/8"* stayed by *4 long stays 2 off. dia. with abt. nuts + 2 with rivets + 2 with*

Diameter of furnace, ~~top~~ *4 1/2* bottom *or* length of furnace *5' 1/4"* thickness of plates *3/8" steel* description of joint *butted with abt. straps*

Thickness of ^{take} furnace ~~cross~~ plates *3/8" steel* stayed by *16 stay tubes* working pressure of shell by rules *5 1/2*

Working pressure of furnace by rules *5 1/2* diameter of ^{take} uptake *3 1/4"* thickness of plates *3/8"* thickness of water tubes *3/8"*

Manhole in shell *15" + 11* *drilled 25" x 22" x 7/16"*

SPARE GEAR. State the articles supplied:— *4 Propeller Blades, 1 propeller shaft, 1 Crank shaft, 1 slide rod*

1 set Coupling bolts for one of Coupling, 2 main bearing bolts, 2 connecting rod bolts + nuts, 2 top ends

4 safety valve springs, 1 set piston bolts + nuts, 1 set piston springs, 150 Condenser tubes + 1000 joints

25 Boiler tubes, 1 set fire bars, 6 doz assorted bolts + nuts, 1 set bilge pump valves, 1 Air pump rod

1 dozen gauge glass. Plate furnace assented.

The foregoing is a correct description,

W. Pearson Manufacturer. *WES*

EARLE'S SHIPBUILDING & ENGINEERING COY LIMITED
General Remarks (State quality of workmanship, opinions as to class, &c. *The Boiler made to approved design and*

tested, run with the engine placed in the ship in accordance with the requirements of the Society's
rules are in my opinion in safe working condition, and the case is respectfully submitted
eligible for the notification ^{L.M.C.} 8.83 in the register Book (The Workmanship good)

It is submitted that this vessel is eligible to have the notification + L.M.C. 8.83 recorded.

WES 20/8/83

The amount of Entry Fee *£ 2: " : "* received by me,
Special *£ 32: 10: " Paid Vick Letter 22/8/83*
Donkey Boiler Fee *£ 2: 2: "*
Certificate (if required) *£ Gratis* 18

(Travelling Expenses, if any, £)

John B. Stevens
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUESDAY 21 AUGUST 1883

+ J. M. C.

