

REPORT ON MACHINERY.

5713

No. 5417
 No. in Survey held at Hull
 Reg. Book. 20
 Date, first Survey 11th Mar. 85 Last Survey 2nd June 1885
 (Number of Visits 12)
 Master James Built at Hull By whom built Charles Ship Co. When built 1885
 Engines made at Hull By whom made Charles Ship Co. when made 1885
 Boilers made at Hull By whom made d. when made 1885
 Registered Horse Power 80 Owners Great Grimsby S.S. Co. Port belonging to Grimsby

ENGINES, &c.—
 Description of Engines Triple compound, inverted cylinders, direct acting & surface condensing
 Diameter of Cylinders 3 15 1/2, 24, 17 1/2 Length of Stroke 24 No. of Rev. per minute 95 Point of Cut off, High Pressure 5/7 Low Pressure 5/5
 Diameter of Screw shaft 7 Diam. of Tunnel shaft 6 1/2 Diam. of Crank shaft journals 7 1/8 Diam. of Crank pins 7 size of Crank webs 8 1/4 x 5
 Diameter of screw 9.3 Pitch of screw 11.3 to 12.6 No. of blades 4 state whether moveable no total surface 3 1/2 sq. ft.
 No. of Feed pumps one diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work ✓
 No. of Bilge pumps one diameter of ditto 4 Stroke 14 Can one be overhauled while the other is at work ✓
 Where do they pump from fore hold, main hold & engine room
 No. of Donkey Engines one Size of Pumps 3 1/2 ram & 6 stroke Where do they pump from Belgu system & sea with deliveries to deck, overboard, boiler & condenser
 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 no
 No. of bilge injections one and sizes 2 1/2 diam. with valve Are they connected to condenser, or to circulating pump yes
 How are the pumps worked Rocking lever from piston rod crosshead
 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 sections of fire bilges How are they protected wood cases
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes in engine room
 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 has been launched 6 May 1885
 Is the screw shaft tunnel watertight no tunnel and fitted with a sluice door yes worked from +

BOILERS, &c.—
 Number of Boilers one Description Circular, multitubular Whether Steel or Iron Steel
 Working Pressure 140 lb Tested by hydraulic pressure to 280 lb Date of test 9th May 1885
 Description of superheating apparatus or steam chest none fitted
 Can each boiler be worked separately ✓ Can the superheater be shut off and the boiler worked separately ✓
 No. of square feet of fire grate surface in each boiler 36 Description of safety valves Spring loaded No. to each boiler 2
 Area of each valve 7 sq. in. 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 5' Diameter of boilers 11.6'
 Length of boilers 9.6' description of riveting of shell long. seams double butt strap circum. seams double rivet laps Thickness of shell plates 15/16
 Diameter of rivet holes 1/8" whether punched or drilled drilled pitch of rivets 5 1/2" Lap of plating 11 3/4" straps
 Percentage of strength of longitudinal joint 80 working pressure of shell by rules 140 lb size of manholes in shell 16" x 12"
 Size of compensating rings 28" x 24" x 15/16 No. of Furnaces in each boiler 2
 Outside diameter 3' 6 1/2" length, top 6.6' bottom 8.6' thickness of plates 1/2" description of joint welded if rings are fitted Corrugated
 Pitch of compensating rings 6' working pressure of furnace by the rules 143 lb combustion chamber plating, thickness, sides 9/16 back 9/16 top 9/16
 Pitch of stays to ditto, sides 8' back 8' top 8' If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 157 lb Diameter of stays at smallest part 1.5 1/8" working pressure of ditto by rules 169 lb end plates in steam space, thickness 15/16
 Pitch of stays to ditto 15" x 15" how stays are secured double nut washers working pressure by rules 140 diameter of stays at smallest part 2 1/4" (solid steel) working pressure by rules 159 lb Front plates at bottom, thickness 3/4" Back plates, thickness 7/8"
 Greatest pitch of stays 8" working pressure by rules 180 lb Diameter of tubes 3 1/4" pitch of tubes 1 1/2" x 4 1/2" thickness of tube plates, front 3/4" back 3/4" how stayed 20 stays each pitch of stays 13 1/2" in run width of water spaces 1 1/4"
 Diameter of Superheater or Steam chest — 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 None fitted



Hull 397-0268

DONKEY BOILER— 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 _____ if fitted with easing gear _____ if steam from main boilers can
 enter the donkey boiler _____ diameter of donkey boiler _____ length _____ description of riveting _____
 Thickness of shell plates _____ diameter of rivet holes _____ whether punched or drilled _____ pitch of rivets _____ lap of plating _____
 per centage of strength of joint _____ thickness of crown plates _____ stayed by _____
 Diameter of furnace, top _____ bottom _____ length of furnace _____ thickness of 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 plates _____ thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *Two top & 2 bottom end connecting rod Bolts*
2 main bearing bolts, 1 set coupling bolts.
Vessel is also efficiently fitted as a sailing vessel.

The foregoing is a correct description,

 Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The Boiler & machinery of the vessel*)
constructed under special survey of good workmanship & placed on board in accordance
with the Society's Rules are in my opinion, in safe working condition.
*The case is respectfully submitted as eligible for the notification *L.M.C. 6.85.*
in the Register Book

The Surveyors Hall

It is submitted that this vessel is eligible to have the notification *L.M.C. 6.85 recorded.

The amount of Entry Fee .. £ 1 : " : " received by me,
 Special .. £ 12 : " : "
 Donkey Boiler Fee .. £ " : " : "
 Certificate (if required) .. £ *Gratis 17/6/85*
 To be sent as per margin.
 (Travelling Expenses, if any, £ 8/-)

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

Committee's Minute **FRIDAY 19 JUNE 1885**

