

REPORT ON MACHINERY.

45638

No. _____ Received at London Office **FRIDAY 11th DEC 1885**
 No. in Survey held at _____ Date, first Survey 17th Sept Last Survey 9th Nov 1885
 Reg. Book. _____ (Number of Visits 8)
62 on the S.S. Nautilus Tons _____
 Master Coles Built at Sunderland By whom built G. L. Gullston When built 1874
 Engines made at Sunderland By whom made G. Clark when made 1874
 Boilers made at Hull By whom made Amos & Smith when made 1884
 Registered Horse Power 95 Owners General Steam Nav Co. Port belonging to London

ENGINES, &c.—

Description of Engines _____
 Diameter of Cylinders _____ Length of Stroke _____ No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____
 Diameter of Screw shaft _____ Diam. of Tunnel shaft _____ Diam. of Crank shaft journals _____ Diam. of Crank pin _____ size of Crank webs _____
 Diameter of screw _____ Pitch of screw _____ No. of blades _____ state whether moveable _____ total surface _____
 No. of Feed pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 No. of Bilge pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 Where do they pump from _____
 No. of Donkey Engines _____ Size of Pumps _____ Where do they pump from _____
 Are all the bilge suction pipes fitted with roses _____ Are the roses always accessible _____ Are the sluices on Engine room bulkheads always accessible _____
 No. of bilge injections _____ and sizes _____ Are they connected to condenser, or to circulating pump _____
 How are the pumps worked _____
 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 _____ 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 _____
 Is the screw shaft tunnel watertight _____ and fitted with a sluice door _____ worked from _____

BOILERS, &c.—

Number of Boilers one Description Return Multitubular Whether Steel or Iron All steel except Tubes & Ladders of iron
 Working Pressure 65 lbs. Tested by hydraulic pressure to 130 lb. Date of test 17th Sept 85
 Description of superheating apparatus or steam chest Steam dome
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately _____
 No. of square feet of fire grate surface in each boiler 54 Description of safety valves Spring No. to each boiler two
 Area of each valve 15.9 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 6" Diameter of boilers 150"
 Length of boilers 10' 6" description of riveting of shell long. seams double rivet BS. circum. seams double R lap. Thickness of shell plates 25/32
 Diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 4 7/8 Lap of plating 10" ~~12"~~
 Percentage of strength of longitudinal joint 75 & 78.5 working pressure of shell by rules 90 size of manholes in shell 16" x 12"
 Size of compensating rings 6" x 3/4" at smallest part No. of Furnaces in each boiler three
 Outside diameter 37" length, top 7 1/2 ft bottom 10 ft thickness of plates 1/2 description of joint double Butt SR. if rings are fitted 1/2
 Greatest length between rings 7' working pressure of furnace by the rules 86 combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2
 Pitch of stays to ditto, sides 9 1/2 x 9 back 8 1/2 x 10 top 9 x 9 1/2 If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 77 Diameter of stays at smallest part 1 1/8 working pressure of ditto by rules 94 end plates in steam space, thickness 25/32
 Pitch of stays to ditto 15 1/2 x 18 how stays are secured Washers & double nuts working pressure by rules 77 diameter of stays at smallest part 2 3/8 working pressure by rules 102 Front plates at bottom, thickness 5/8 Back plates, thickness 7/8
 Greatest pitch of stays 12" working pressure by rules 97 Diameter of tubes 3 1/2 pitch of tubes 4 1/2 thickness of tube plates, front 5/8 back 7/8 how stayed ST Tube pitch of stays 9 x 13 1/2 width of water spaces 9 1/2"
 Diameter of Superheater or Steam chest 48" length 8' 0" thickness of plates 1/2 description of longitudinal joint lap DR. diam. of rivet holes _____
 Pitch of rivets 2 5/8 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 _____

Form No. 4-103-147



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:—

The foregoing is a correct description,
Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *A new main boiler has been fitted on board which has been built under the inspection of the Board of Trade for an other steamer. The attached list of steel test and some correspondence have been obtained from the owners. The boiler is stamped B.O.T 160 lbs 28,284. This boiler has been examined and found in a good condition and the dimensions taken as set down in this report. The safety valves have been set to blow at 65 lb.*

Examined donkey boiler & found it in a good condition. Examined HP cylinder & slide valve & found them in a good condition. Examined both crank pins and found them good. A new propeller and a new lignum vitae bush have been fitted. Examined Leucovers & connections after they were shifted & found them good. The Ballast suction is on the ships bottom. It can easily be reached by lifting a large door in the hold.

Examined donkey boiler & found it in a good condition. As far as seen the machinery of this vessel is in a safe working condition and is in my opinion eligible to have the notification NB. 85 and B.S. 12. 85 recorded in the Register Book

It is submitted that this vessel is eligible to have NB. 85 and B.S. 12. 85 recorded
M 10/12/85

The amount of Entry Fee .. £ — : — : — received by me,
 Special .. 14/11/85 £ 4 : 4 : —
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : : 30 Dec 1885

(Travelling Expenses, if any, £)

Committee's Minute

TUESDAY 15 DEC 1885

C. J. Brown
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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