

REPORT ON MACHINERY.

Received from
Surveyor.

6 - AUG. 1900

Port of Glasgow.

Received at London Office

18

No. in Survey held at Glasgow.Date, first Survey 18th March 1898. Last Survey 2nd August 1900.

Reg. Book.

(Number of Visits)

on the Screw steamer Pollux.Gross
Tons
NetMaster _____ Built at Glasgow By whom built MacKie & Thomson When built 1900Engines made at Coatbridge By whom made W. V. V. Lidgerwood when made 1900Boilers made at Glasgow. By whom made Anderson & Hall when made 1900.Registered Horse Power _____ Owners _____ Port belonging to GrimsbyNom. Horse Power as per Section 28 50 Is Refrigerating Machinery fitted No Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple expansion screw No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 11 1/2", 18 1/2", 30" Length of Stroke 21" Revs. per minute 116 Dia. of Screw shaft as per rule 5.98
 Dia. of Tunnel shaft as fitted none Dia. of Crank shaft journals as per rule 5.7 Dia. of Crank pin 6" Size of Crank webs 4 1/2" Lgth. of stern bush 24"
 Dia. of thrust shaft under collars 6" Dia. of screw 8.0" Pitch of screw 10.6" No. of blades 4 State whether moveable no Total surface 24 sq. ft.
 No. of Feed pumps 1 Diameter of ditto 2 1/4" Stroke 11" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 1 Diameter of ditto 2 1/4" Stroke 11" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines one Sizes of Pumps 6" x 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 8" dia. (1 8 1/2" injector) In Holds, &c. one 8" dia.
 No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump pumps a separate donkey suction fitted in Engine room & size yes 2"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none.
 Are all connections with the sea direct on the skin of the ship yes. Are they Valves or Cocks Valves & cocks
 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 none How are they protected ✓
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes.
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launch Is the screw shaft tunnel watertight none
 Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record £) Total Heating Surface of Boilers 873 sq. ft. Is forced draft fitted No.
 No. and Description of Boilers One: Cylindrical built by Glasgow & Co. Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.
 Date of test _____ Can each boiler be worked separately ✓ Area of fire grate in each boiler 34 sq. ft. No. and Description of safety valves to each boiler 2 Patent Spring Area of each valve 3.97" Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 9 1/2" Mean dia. of boilers 10.6" Length 9.6" Material of shell plates Steel
 Thickness 3/32" Range of tensile strength 28-32 tons Are they welded or flanged no Descrip. of riveting: cir. seams Lap & double long. seams Double Butt Shaps.
 Diameter of rivet holes in long. seams 3/32" Pitch of rivets 6 1/4" 2 rows 3 1/32" Top of plates or width of butt straps 14 1/2"
 Per centages of strength of longitudinal joint 90 Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 26 x 20 x 1" No. and Description of Furnaces in each boiler 2: plain Material Steel Outside diameter 40 1/2"
 Length of plain part 5' 7" Thickness of plates 3/32" Description of longitudinal joint weld No. of strengthening rings partial at bottom.
 Working pressure of furnace by the rules 184 lbs: Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back 5" Top 5" Bottom 3/32"
 Pitch of stays to ditto: Sides 8 1/2" x 9 1/2" Back 8" x 8 1/2" Top 9 1/2" x 4 1/2" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 185 lbs:
 Material of stays Steel Diameter at smallest part 1 1/32" Area supported by each stay 30" Working pressure by rules 194 lbs: End plates in steam space:
 Material Steel Thickness 2 3/32" Pitch of stays 14 1/2" x 14 1/2" How are stays secured Double nuts & washers. Working pressure by rules 185 lbs: Material of stays Steel
 Diameter at smallest part 2 5/16" Area supported by each stay 211" Working pressure by rules 203 lbs Material of Front plates at bottom Steel
 Thickness 13/16" Material of Lower back plate Steel Thickness 2 3/32" Greatest pitch of stays 12" Working pressure of plate by rules 335 lbs:
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/4" x 4 5/8" Material of tube plates Steel Thickness: Front 13/16" Back 3/4" Mean pitch of stays 10.6"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 215 lbs 180 lbs: Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8" x 1 3/8" Length as per rule 30" Distance apart 4 1/2" Number and pitch of Stays in each 2: 9 1/2"
 Working pressure by rules 189 lbs: Superheater or Steam chest; not connected to boiler none. Can the superheater be shut off and the boiler worked separately ✓
 Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓
 Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓
 If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓
 Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

DONKEY BOILER—

No. *None* 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 ✓ Pressure to which they are adjusted ✓ If fitted with easing gear ✓ If steam from main boilers can enter the donkey boiler ✓
 Dia. of donkey boiler ✓ Length ✓ Material of shell plates ✓ Thickness ✓ Range of tensile strength ✓
 Descrip. of riveting long. seams ✓ Dia. of rivet holes ✓ Whether punched or drilled ✓ Pitch of rivets ✓
 Lap of plating ✓ Per centage of strength of joint ^{Rivets} Plates } ✓ Thickness of shell crown plates ✓ Radius of do. ✓ No. of Stays to do. ✓
 Dia. of stays. ✓ Diameter of furnace Top ✓ Bottom ✓ Length of furnace ✓ Thickness of furnace 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 uptake plates ✓ Thickness of water tubes ✓

SPARE GEAR. State the articles supplied:— *Two top end, two bottom end connecting rod bolts, two main bearing bolts, one set coupling bolts one set of feed & bilge pump valves: ect.*

The foregoing is a correct description,

Manufacturer.

Anderson & Hayall

Dates of Survey while building
 During progress of work in shops— 1898. Mar 18. April 26. May 5. 16. June 3. July 26. Sep 29—1899—Oct 20. Nov 2. 7. Dec 9. 13. 18.
 During erection on board vessel— 1900. Feb 13. 28. Mar 7. 20. April 5. 17. 24. 30. May 1. 14. 22. 30. 31. June 4. 11. 12. 13. 18. 21. 30.
 Total No. of visits July 2. 9. 12. 25. 26. Aug 2. — 29— Is the approved plan of main boiler forwarded herewith ✓
 " " " donkey " " " ✓

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

The main Boiler of this vessel has been built under Special Survey and the materials and workmanship are good. When completed it was examined under hydraulic pressure of 560 lbs per sq. inch & found tight & sound.

The machinery of this vessel has been constructed under Special Survey, the material & workmanship are of good quality, it has been securely fastened on board & tried under steam.

In our opinion it is eligible to be classed in the Register Book with record of L.M.C. 8.00—

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 8.00.

B.D.
14.8.00

The amount of Entry Fee. £ 1 : : : When applied for,
 Special £ 8 : : : 9.8.1900
 Donkey Boiler Fee £ : : : *not*
 Travelling Expenses (if any) £ : : : 25.8.00

Committee's Minute

Glasgow. 13 AUG. 1900

Assigned

L.M.C. 8.00.

(when fees paid)

Wm. K. Austin
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register
 Foundation