

REPORT ON MACHINERY.

Greenock
No. 9380

Port of Glasgow

Received at London 25 AUGUST 1887

No. in Survey held at Glasgow

Date, first Survey 11th Feb 1887 Last Survey 20th Apr 1887

Reg. Book Suppl.

(Number of Visits 35) 2945 2989
Tons 2273 2348

1 on the Screw Steamer "Tasso"

Master Diller Built at Greenock By whom built Russell & Co. When built 1887.

Engines made at Glasgow By whom made Jas. Howden & Co. when made 1887.

Boilers made at Glasgow By whom made Jas. Howden & Co. when made 1887.

Registered Horse Power 250 Owners R. McAndrew & Co. Port belonging to Glasgow

ENGINES, &c.—

Description of Engines Triple Expansion.
Diameter of Cylinders 23.39 & 64 Length of Stroke 42 No. of Rev. per minute 80 Point of Cut off, High Pressure var. Low Pressure var.
Diameter of Screw shaft 12 1/2 Diam. of Tunnel shaft 12 Diam. of Crank shaft journals 12 Diam. of Crank pin 12 size of Crank webs — Patent
Diameter of screw 15.3 Pitch of screw 17 to 19 feet No. of blades 4 state whether moveable sol. total surface 65 ft²
No. of Feed pumps 2 diameter of ditto 3 Stroke 21 Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 diameter of ditto 4 1/2 Stroke 21 Can one be overhauled while the other is at work yes.
Where do they pump from All compartments
No. of Donkey Engines two Size of Pumps 10" x 12" x 9" Where do they pump from Holwell, Sea tanks & bilges. Cameron 4"

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 One and sizes 5 1/2 Are they connected to condenser, or to circulating pump Circulating pump.
How are the pumps worked by levers.
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 bilge & tank suction. How are they protected wood covering
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 on stocks before launching.
Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from upper platform

BOILERS, &c.—

Number of Boilers Two Description Round Multitubular Whether Steel or Iron Steel.
Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs. Date of test 24th June 1887.
Description of superheating apparatus or steam chest none
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 45 Description of safety valves direct spring No. to each boiler two
Area of each valve 9.62 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 on woodwork 14" Diameter of boilers 14'-4"
Length of boilers 9'-4 1/2 description of riveting of shell long. seams treb. riv. d. butt circum. seams doub. riv. lap Thickness of shell plates 1 1/2"
Diameter of rivet holes 1 9/32 whether punched or drilled drilled pitch of rivets 9 3/32 & half. Lap of plating 18 3/4 strap.
Per centage of strength of longitudinal joint 86% working pressure of shell by rules 162 lbs size of manholes in shell 12 x 16"
Size of compensating rings wrought iron doubling plate No. of Furnaces in each boiler three
Outside diameter 3'-6" length, top 6'-4 1/2 bottom 8'-11" thickness of plates 9/16 description of joint welded if rings are fitted Fox.
Greatest length between rings — working pressure of furnace by the rules 160 lbs combustion chamber plating, thickness, sides 5/8 back 5/8 top 5/8
Pitch of stays to ditto, sides 8 7/8 x 8 7/8 back 8 7/8 x 8 7/8 top 7 3/4 x 8 7/8 if stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 160 lbs
Diameter of stays at smallest part 1 1/2" working pressure of ditto by rules 160 lbs and plates in steam space, thickness 1"
Pitch of stays to ditto 16" x 16" how stays are secured d. nuts wash working pressure by rules — diameter of stays at smallest part 2 7/8" screw working pressure by rules 160 lbs Front plates at bottom, thickness 3/4 Back plates, thickness 25/32
Greatest pitch of stays — working pressure by rules — Diameter of tubes 2 1/2" pitch of tubes 3 3/4 x 3 1/16 thickness of tube plates, front 12/16 back 12/16 how stayed S. tubes pitch of stays 2" tube width of water spaces 6"
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 —

DONKEY BOILER— Description *Multitubular*
Made at *Glasgow* by whom made *J. Howden & Co* when made *1887* where fixed *on deck*.
Working pressure *70 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *1829* fire grate area *16 1/2* description of safety
valves *direct spring* No. of safety valves *two* area of each *4"* if fitted with easing gear *yes* if steam from main boilers can
enter the donkey boiler *no* diameter of donkey boiler *7'-6"* length *7'-6"* description of riveting *double riv. lap*.
Thickness of shell plates *7/16* diameter of rivet holes *3/4"* whether punched or drilled *drill* pitch of rivets *2 1/2"* lap of plating *3 3/4"*
per centage of strength of joint *40%* thickness of ~~end~~ plates *5/8"* stayed by *stays 2.2"* area
Diameter of furnace, top *3'-6"* bottom *—* length of furnace *5'-4"* thickness of plates *1/2"* description of joint *welded*
Thickness of furnace crown plates *1/2"* stayed by *stays 8 1/2" x 8"* pitch *—* working pressure of shell by rules *72 lbs*
Working pressure of furnace by rules *70 lbs* diameter of ~~tubes~~ *uptake* *3"* thickness of plates *9/16* thickness of ~~back~~ *plates* *5/8"*

SPARE GEAR. State the articles supplied:— *Spare web & pin and part of crank shaft.*
Valve spindles. Feed & bilge pump valves & seats. Top and bottom
end bolts. Main bearing & coupling bolts. Bolts & nuts.
iron & assorted.

The foregoing is a correct description,
James Howden & Co Manufacturers
Glasgow

General Remarks (State quality of workmanship, opinions as to class, &c. *The above mentioned*)
Engines and Boilers are now completed onboard in a
Satisfactory manner and the Machinery is in
our opinion eligible to be noted in the Society's
Register Book: + L.M.C. 8.87.

Howden's system of forced draught is fitted in this
boiler and was tried when running the measured
mile at Skelmorlie on the 20th inst. with the following
results,

Average speed of four runs was 13.12 knots. Steam 160 lbs
Revolutions 78 to 80.

One run only was made with natural draught when
the steam pressure fell to 146 lbs. Revolutions 73 and speed
12.24 knots. an indicated horse power of 1459 was obtained

The amount of Entry Fee .. £ 2 : - : - received by me,

Special .. £ 32 : 10 : -

Donkey Boiler Fee .. £ - : - : -

Certificate (if required) .. £ - : - : - 23/8/1887

To be sent as per margin.

(Travelling Expenses, if any, £ 4/6)

Committee's Minute

FRIDAY 26 AUGUST 1887

+ L.M.C. 8.87

John Anderson & James Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Glasgow
Lloyd's Register
Foundation