

REPORT ON MACHINERY.

No. 8165

Received at London Office THURS 13 OCT 1887

No. in Survey held at
Reg. Book.

Date, first Survey 15th February Last Survey Oct 8th 1884
(Number of Visits 36) Tons 1482.82
955.56.

on the Screw Steamer "Cascougada"
Master W. Quier Built at Glasgow By whom built A. Stephen & Sons When built 1884
Engines made at Glasgow By whom made " " " " when made 1884
Boilers made at " By whom made " " " " when made 1884
Registered Horse Power 1407½ Owners Ferguson & Reid Port belonging to Glasgow

ENGINES, &c.—

Description of Engines Triple Expansion
Diameter of Cylinders 18" 29" 46" Length of Stroke 39" No. of Rev. per minute 42 Point of Cut off, High Pressure — Low Pressure —
Diameter of Screw shaft 10" Diam. of Tunnel shaft 9½" Diam. of Crank shaft journals 10" Diam. of Crank pin 10¼" size of Crank webs 4" x 11¼"
Diameter of screw 13½" Pitch of screw 14½" No. of blades 2 state whether moveable Yes total surface 41½"
No. of Feed pumps 2 diameter of ditto 3½" Stroke 21" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 diameter of ditto 4½" Stroke 21" Can one be overhauled while the other is at work Yes
Where do they pump from All Compartments
No. of Donkey Engines 2 Size of Pumps 7" x 4½" x 1½" Where do they pump from Sea Pige Hotwell & Ballast Tanks

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 4½" Are they connected to condenser, or to circulating pump To circulating
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 near to load line
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 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 Slip before launching
Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper deck

BOILERS, &c.—

Number of Boilers One Description Round Horizontal Whether Steel or Iron Steel
Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 23rd September 1884 H. C. R.
Description of superheating apparatus or steam chest none
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 50½ 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 or woodwork 10" Diameter of boilers 14½"
Length of boilers 11' 9" description of riveting of shell long. seams double butt strap circum. seams Double pin Thickness of shell plates 1½"
Diameter of rivet holes 15/16" whether punched or drilled Drilled pitch of rivets 8½" Lap of plating 22" straps
Per centage of strength of longitudinal joint 84% working pressure of shell by rules 166 lbs size of manholes in shell 16" x 12"
Size of compensating rings McNeil's rings fitted No. of Furnaces in each boiler 1
Outside diameter 3' 3" length, top 8' 3" bottom 11½" thickness of plates 7/16" description of joint Corrugated if rings are fitted
Greatest length between rings — working pressure of furnace by the rules 160 lbs combustion chamber plating, thickness sides 1/32" back 1/32" top 1/32"
Pitch of stays to ditto, sides 7' x 7" back 7' x 7" top 7' x 7" 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 1/8" working pressure of ditto by rules 175 lbs end plates in steam space, thickness 1 1/32"
Pitch of stays to ditto 10' x 16½" how stays are secured By double nuts working pressure by rules 160 lbs diameter of stays at smallest part 2 3/4" = 5.5 area working pressure by rules 180 lbs Front plates at bottom, thickness 1/16" Back plates, thickness 1/16"
Greatest pitch of stays 12½' x 7' working pressure by rules 160 lbs Diameter of tubes 3½" pitch of tubes 4' x 4 3/4" thickness of tube plates, front 1/16" back 1/16" how stayed By tubes pitch of stays 9½' x 9½" width of water spaces 6"
Diameter of Superheater or Steam chest None 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 — It 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 —

8165 gds

DONKEY BOILER— Description *Round Vertical*
Made at *Glasgow* by whom made *A. Stephen & Son* when made *1884* where fixed *In Stechhold*
Working pressure *70 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *1861* fire grate area *24 ft²* description of safety valves *Sweet Spring* No. of safety valves *Two* area of each *4"* if fitted with easing gear *Yes* if steam from main boilers enter the donkey boiler *No* diameter of donkey boiler *6' 6"* length *11' 3"* description of riveting *Double + Single*
Thickness of shell plates *13/32"* diameter of rivet holes *7/8"* whether punched or drilled *Drilled* pitch of rivets *3 1/2"* lap of plating *5' 4"*
per centage of strength of joint *65%* thickness of crown plates *10/16"* stayed by *Nine Stays 1 3/4" dia and Uptake*
Diameter of furnace, top *5' 1"* bottom *4' 3"* length of furnace *5' 8"* thickness of plates *9/16"* description of joint *Lap, Single*
Thickness of furnace crown plates *9/16"* stayed *as above* working pressure of shell by rules *72 lbs*
Working pressure of furnace by rules *Furnace fitted with 3 cross tubes + 4 rows of screw stays* diameter of uptake *15"* thickness of plates *9/16" iron* thickness of water tubes *7/16"*

SPARE GEAR. State the articles supplied:— *2 Connecting rod bolts for top + bottom ends 2 main bearing bolts, 1 set Coupling bolts, 1 Feed + 1 bilge pump valve, also set Indicators, 2 Propeller blades, safety valves and assortment of bolts, nuts, iron, Boiler + Condenser tubes*
The foregoing is a correct description,
Alex. Stephen & Son Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c) *These Engines and Boilers are of good workmanship and materials and are now in good order and safe working condition and eligible in my opinion to be noted in the Register Book* *Lloyds M.C. 10/84*

Submitted that this vessel is eligible to have the notification + L.M.C. 10.87
13.10.87

The amount of Entry Fee .. £ *2* : - : - received by me, *[Signature]*
Special .. £ *25* : *10* : -
Donkey Boiler Fee .. £ - : - : -
Certificate (if required) .. £ - : - : - *11/10/1884*
To be sent as per margin. *4/6*
(Travelling Expenses, if any, £ - *4/6*)
Committee's Minute

FRIDAY 14 OCT 1887

James Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Clyde District