

# REPORT ON MACHINERY.

Port of Glasgow

No. 12154  
11 URS. 20 APR 1895

Received at London Office

15

No. in Survey held at Glasgow Date, first Survey 2<sup>nd</sup> Oct 1891 Last Survey April 15-18 93  
 Reg. Book. (Number of Visits 1150) Gross 12950  
 Tons { Net 4941  
 in the Swan Speed Steamer "Compania" When built 1893  
 Master W H B. Hams Built at Glasgow By whom built The Fairfield St E Coy  
 Engines made at Glasgow By whom made " " " " when made 1893  
 Boilers made at " By whom made " " " " when made 1893  
 Registered Horse Power 5000 Owners Cunard Coy Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 4280

**ENGINES, &c.** — Description of Engines Triple Expansion Twin screw 10 (5 b.cash)  
 Diameter of Cylinders 3 1/2 4 1/2 4 1/2 Length of Stroke 69" Revolutions per minute 80 Diameter of Screw shaft as per rule  
 as per rule 26" as fitted  
 Diameter of Tunnel shaft as per rule 24" Diameter of Crank shaft journals 25" Diameter of Crank pin 25 1/2" Size of Crank webs 19 1/2 x 19 1/2  
 Diameter of screw 23 1/2 Intended to be altered No. of blades 4 See State whether moveable Yes Total surface Intended to be altered  
 No. of Feed pumps 2 to each engine Stroke 30" Can one be overhauled while the other is at work Yes after a little  
 No. of Bilge pumps 2 to each engine Stroke 30" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 13 Sizes of Pumps 8 1/2 x 10 x 11 1/2 x 13 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 4 Suctions 4 1/2" 2" 1" 1/2" x 9 1/2 x 24" In Holds, &c. 10 Suctions 3 1/2" main suction pipes  
 10" 3 1/2" 1" 1/2" x 9 1/2 x 24" from off engine room bulkheads before pipes from  
 No. of bilge injections 2 60" to condenser 2 Centrifugal bulkheads are 4" bore  
 sizes 1 - 20" Connected to condenser, or to circulating pump Pumps as separate donkey suction fitted in Engine room & size Yes  
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sutes on Engine room bulkheads always accessible Yes  
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks 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 Bilge pipes to fore hold & stokeholds How are they protected by good casing  
 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 by stops before Yes  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock launching the screw shaft tunnel watertight Yes  
 Is it fitted with watertight doors Yes Worked from upper platform

**BOILERS, &c.** — (Letter for record) Total Heating Surface of Boilers 80660 ft<sup>2</sup>

No. and Description of Boilers 12 Double ended + 1 Single	Working Pressure 165 lbs tested by hydraulic pressure	330 lbs
29 March 11 <sup>th</sup> to 4 <sup>th</sup> April	210 lbs double ended	
Date of test May Can each boiler be worked separately Yes Area of fire grate in each boiler	100 ft <sup>2</sup> in single	No. and Description of safety valves to
each boiler 3 Single Ended	20.45	100 ft <sup>2</sup> in single
with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork	about 16"	Are they fitted
Length 18" Material of shell plates Steel Thickness 1/2" Description of riveting: circum. seams	14" long. seams	14" 5" Mean diameter of boilers
Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 9 1/4" 3 1/8" + 4 1/8" Lap of plates or width of butt straps	Butt straps 1 1/2" x 19"	by boiler
Per centages of strength of longitudinal joint 84% rivets 82% plate Working pressure of shell by rules 196 lbs Size of manhole in shell 16" x 12"		
Size of compensating ring 1/2" No. and Description of Furnaces in each boiler cast ironed steel Outside diameter 3 1/4"		
Length of stay top 1/2" thickness of plates crown 1/32" bottom " Description of longitudinal joint Welded		No. of strengthening rings
Working pressure of furnace by the rules 165 lbs Combustion chamber plates: Material Steel thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1/16"		
Pitch of stays to ditto: Sides 4 1/4" Back 4 1/4" Top 4 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 182 lbs		
Material of stay Steel Diameter at smallest part 2 1/8" Area supported by each stay 144.6" Working pressure by rules 165 lbs End plates in steam space		
Material Steel Thickness 1 1/32" Pitch of stays 1 1/4" How are stays secured by double nuts Working pressure by rules 300 lbs Material of stays Steel		
Diameter at smallest part 2 1/4" Area supported by each stay 289" Working pressure by rules 165 lbs Material of Front plates at bottom Steel		
Thickness 13/16" Material of Lower back plate Steel Thickness 1/16" Greatest pitch of stays 12" Working pressure of plate by rules		
Diameter of tubes 3 1/2" Pitch of tubes 4 1/8" x 4 1/8" Material of tube plate Steel Thickness: Front 1 1/16" - 10 1/8" x 8 1/4" Mean pitch of stays 12"		
Pitch across wide water spaces 14 1/4" Working pressures by rules 263 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8" x 13/16" x 2 1/2" Number and pitch of Stays in each 5 7/8 pitch		
Working pressure by rules Superheater or Steam chest; how 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		
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		

12157 gos

## DONKEY BOILER—

Description

Multitubular  
 Made at Glasgow By whom made L. & G. Fairfield & Co. Ltd. When made 1893 Where fixed Above after deck  
 Working pressure tested by hydraulic pressure to 330 lbs. No. of Certificate 3093 Fire grate area 38.5" Description of safety valves Direct exp.  
 No. of safety valves 2 Area of each 7068 Pressure to which they are adjusted 165 If fitted with easing gear Yes If steady from main boilers can enter the donkey boiler 800 Diameter of donkey boiler 10.70" Length 9' 1" Material of shell plates Steel Thickness 3/32" Description of riveting long seams Double straps Rivets Diameter of rivet holes 1/16" Whether punched or drilled Drilled Pitch of rivets 1/2" 1/2" Lap of plating 10" Per centage of strength of joint Rivets 90% Conv. Chamber 1/16" Radius of da. 1/16" No. of Stays to do. 10  
 Dia. of stays 1/2" Diameter of furnace 14.3" Bottom 1/2" Length of furnace 6' 11 1/2" Thickness of furnace plates 1/16" Description of  
 join Braced Thickness of bottom plates 1/16" Stayed by 23 stays 16 1/2 x 16 1/2 Working pressure of shell by rules 180 lbs  
 Working pressure of furnace by rules 210 lbs Diameter of tube 3 1/4" Thickness of upper plates 11/16" 1/16" thickness of main tubes 1/8" 1/8" exp.

SPARE GEAR. State the articles supplied:— Air pumps bucket with rod jaws to 8 bolts for eccentric strap. Wrenches, bolts, 4 bottom end bolts, 1 set of crank shaft coupling bolts, set of valves for all the pumps, packing rings, main bearing & compound rod bushes and a considerable quantity of other gear to be carried on board.

The foregoing is a correct description,  
 THE FAIRFIELD SHIPBUILDING  
 AND ENGINEERING COY. LIMITED, Manufacturer.

Propeller, shaft & six blades, 3 piece of crank shaft, 1/2" x 1/2" bush complete, pins, and bush 2. High pressure piston rods & nuts, rod, also valves &

General Remarks (State quality of workmanship, opinions as to class, &c.) Contd. 6 pairs. Crank pin braces.

escape valves Springs all those heavy items are intended to be kept on board besides a large quantity of other gear to facilitate repairs at any time.

The steel shafting was all forged & rough turned by Messrs. Dick & Co. of Sheffield, butt finished and the crank portions built & put together by The Laird's Coy. The connecting rods forged by the Parkhead Foundry, Large Eng. &c. Very little cast steel has been used except for pistons and weight shaft levers tested from which was made by the Society's Engineers of Farnmores.

The Engines & boilers of this vessel have been built under Survey. The workmanship & materials are of good description and they are now in good order and safe working condition & eligible in our opinion to be noted in the Register Book **Lloyd's**  
**No. C. 4793**

The Surveyors are requested not to write on or before the space for Committee's Minutes.

Certificate (if required) to be sent to

The amount of Entry Fee £ 3

Special £ 234

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for  
18/4/93  
MACHINERY  
WATER

When received  
19/4/93

James Mollison, John Sanderson  
Engineer, Surveyor to Lloyd's Register of British & Foreign Shipping.

Clyde District

Committee's Minute

TUERS. 20 APR 1893

Assigned

+ £ 16 6 95

in Minib. on Hull Reh

© 2019



Lloyd's Register  
Foundation