

REPORT ON MACHINERY.

105. 11 SEP 1900

Port of *Glasgow*

No. in Survey held at *Paisley* Date, first Survey *11 May* Last Survey *13 Aug 1900*
 Reg. Book. *350* on the *S S Emilia* (Number of Visits *13*)
 Master *Pio Francich* Built at *Port Glasgow* By whom built *Russell & Co.* Tons {Gross *3604* Net *2347*
 Engines made at *Greenock* By whom made *Rankin & Blackmore* when made *1900*
 Boilers made at *Paisley* By whom made *A & Craig & Co. Ltd.* when made *1900*
 Registered Horse Power _____ Owners *Fratelli Cosulich* Port belonging to *Trieste*
 Nom. Horse Power as per Section 28 *300* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines

Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft	No. of Cylinders	No. of Cranks
<i>as per rule</i>	<i>as per rule</i>	<i>as per rule</i>	<i>as fitted</i>		
Dia. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs		Lgth. of stern bush
collars	Dia. of screw	Pitch of screw	No. of blades	State whether moveable	Dia. of thrust shaft under
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		
No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps			
In Engine Room	In Holds, &c.				
No. of bilge injections	sizes	Connected to condenser, or to circulating pump	Is a separate donkey suction fitted in Engine room & size		
Are all the bilge suction pipes fitted with roses	Are the roses in Engine room always accessible	Are the sluices on Engine room bulkheads always accessible			
Are all connections with the sea direct on the skin of the ship	Are they Valves or Cocks				
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates	Are the discharge pipes above or below the deep water line				
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				
What pipes are carried through the bunkers	How are they protected				
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times					
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges					
When were stern tube, propeller, screw shaft, and all connections examined in dry dock	Is the screw shaft tunnel watertight				
Is it fitted with a watertight door	worked from				

BOILERS, &c.—

(Letter for record) Total Heating Surface of Boilers *660 sq ft* Is forced draft fitted *No.*
 No. and Description of Boilers *One Single Ended* Working Pressure *80 lb* Tested by hydraulic pressure to *160 lb*
 Date of test *13/8/00* Can each boiler be worked separately Area of fire grate in each boiler *26 sq ft* No. and Description of safety valves to
 each boiler *Two direct spring* Area of each valve *5.94 sq in* Pressure to which they are adjusted *80 lb* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *Boiler outside* Mean dia. of boilers *9-6 1/2* Length *8-0* Material of shell plates *Steel*
 Thickness *1/2* Range of tensile strength *28,320* Are they welded or flanged *Neither* Descrip. of riveting: cir. seams *Single Lap* long. seams *Double Lap*
 Diameter of rivet holes in long. seams *13/16* Pitch of rivets *3 7/16* Lap of plates or width of butt straps *5 3/4*
 Percentages of strength of longitudinal joint rivets *77.0* Working pressure of shell by rules *81 lb* Size of manhole in shell *16 x 12*
 Size of compensating ring *29 1/2 x 25 x 5/8* No. and Description of Furnaces in each boiler *Two, Plain* Material *Steel* Outside diameter *36*
 Length of plain part top *6.0* bottom *6.0* Thickness of plates crown *1 1/2* bottom *1 1/2* Description of longitudinal joint *Welded* No. of strengthening rings *None*
 Working pressure of furnace by the rules *87* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2* Back *15/32* Top *19/32* Bottom *1/2*
 Pitch of stays to ditto: Sides *8 1/2 x 8 1/2* Back *9 x 9* Top *12 x 8 1/2* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *83 lb*
 Material of stays *Steel* Diameter at smallest part *1.19* Area supported by each stay *81* Working pressure by rules *93 lb* End plates in steam space:
 Material *Steel* Thickness *5/8* Pitch of stays *11 1/4 x 11 1/4* How are stays secured *Double Nuts* Working pressure by rules *88 lb* Material of stays *Steel*
 Diameter at smallest part *2.030* Area supported by each stay *206* Working pressure by rules *98* Material of Front plates at bottom *Steel*
 Thickness *5/8* Material of Lower back plate *Steel* Thickness *9/16* Greatest pitch of stays *9* Working pressure of plate by rules *135*
 Diameter of tubes *3 1/2* Pitch of tubes *4 1/4* Material of tube plates *Steel* Thickness: Front *5/8* Back *5/8* Mean pitch of stays *12 3/4*
 Pitch across wide water spaces *13* Working pressures by rules *82 lb* Girders to Chamber tops: Material *Steel* Depth and
 Thickness of girder at centre *6 x 1 1/4* Length as per rule *23* Distance apart *12* Number and pitch of Stays in each *One 11 1/2*
 Working pressure by rules *93 lb* 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
 Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____
 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. *one* Description *See other side.*

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 _____ 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:—



The foregoing is a correct description,
Manufacturer.

Dates of Survey { During progress of work in shops - - } 1900 - May. 11. 17. 28. 30. June. 8. 16. 27. July. 17. 23. 26,
while board vessel - - } Aug. 2. 3. 13
building } Total No. of visits 13.

Is the approved plan of main boiler forwarded herewith

General Remarks (State quality of workmanship, opinions as to class, &c.) *This Donkey Boiler has been built under special survey the material and workmanship being of good quality, and was satisfactorily tested by hydraulic pressure to (160) one hundred and sixty pounds per square inch. This boiler has been forwarded to Port Glasgow to be fitted on board the S.S. Emilia.*

Certificate (if required) to be sent to

The amount of Entry Fee. . . £ : : When applied for,
Special £ : : 2/9/1900
Donkey Boiler Fee . . . £ 2 : 2 : When received,
Travelling Expenses (if any) £ : : 2/9/1900

George Furdich
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *Glasgow* 10 SEP. 1900

Assigned

See G.L.B. Report p 12785.

