

REPORT ON MACHINERY.

No. 14223

Port of Greenock

Received at London Office

1905 APR 19

No. in Survey held at Greenock Date, first Survey 23rd May 1904 Last Survey 23rd March 1905
 Reg. Book. "River Clyde" (Number of Visits 17)
 on the Screw Steamer "River Clyde" Tons { Gross _____ Net _____
 Master Built at Port Glasgow. By whom built Russell & Co^y When built 1905
 Engines made at Greenock By whom made J. G. Kincaid & Co^y when made 1905
 Boilers made at Greenock By whom made Scott's S.S. Ry. Co^y Ltd. when made 1905
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Section 28 _____ Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

ENGINES, &c.—Description of Engines

No. of Cylinders _____ No. of Cranks _____
 Dia. of Cylinders _____ Length of Stroke _____ Revs. per minute _____ Dia. of Screw shaft _____ Material of screw shaft _____
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube _____ Is the after end of the liner made water tight in the propeller boss _____
 If the liner is in more than one length are the joints burned _____ If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive _____
 Is the shaft lapped or protected between the liners _____ Length of stern bush _____
 Dia. of Crank shaft journals _____ Dia. of Crank pin _____ Size of Crank webs _____ Dia. of thrust shaft under _____
 Dia. of screw _____ Pitch of screw _____ No. of blades _____ State whether moveable _____ Total surface _____
 pumps _____ Diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 pumps _____ Diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 Engines _____ Sizes of Pumps _____ No. and size of Suctions connected to both Bilge and Donkey pumps _____
 Room _____ In Holds, &c. _____
 Connected to condenser, or to circulating pump _____ Is a separate donkey suction fitted in Engine room & size _____
 Are the roses in Engine room always accessible _____ Are the sluices on Engine room bulkheads always accessible _____
 Are they Valves or Cocks _____
 Are the discharge pipes above or below the deep water line _____
 Are the blow off cocks fitted with a spigot and brass covering plate _____
 How are they protected _____
 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 5388 sq. ft. Is forced draft fitted no.
 No. and Description of Boilers Two Cylindrical Hull Single Ended Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.
 Date of test 16/1/05 Can each boiler be worked separately Yes Area of fire grate in each boiler 45 sq. ft. No. and Description of safety valves to each boiler 2: Direct Spring Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____
 Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers 16' 6" Length 11' 0" Material of shell plates Steel
 Thickness 1/16" Range of tensile strength 28-32 tons Are they welded or flanged no. Descrip. of riveting: cir. seams Lap Double long. seams D: B. Straps
 Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 3/8" 4.908" Lap of plates or width of butt straps 20 1/4"
 Per centages of strength of longitudinal joint _____ Working pressure of shell by rules 179 lbs. Size of manhole in shell 16" x 12"
 Size of compensating ring Flanged Ring No. and Description of Furnaces in each boiler 4: Morrison's Material Steel Outside diameter 43 1/4"
 Length of plain part _____ Thickness of plates _____ Description of longitudinal joint weld. No. of strengthening rings none.
 Working pressure of furnace by the rules 188 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1 3/32" Back 1 9/32" Top 1 9/32" Bottom 1 8/32"
 Pitch of stays to ditto: Sides 1/2" x 8 1/2" Back 8 1/4" x 8 1/2" Top 1 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads _____ Working pressure by rules 182 lbs.
 Material of stays Steel Diameter at smallest part 1 1/2" x 1 5/8" Area supported by each stay 64" Working pressure by rules 182 lbs. End plates in steam space: _____
 Material Steel Thickness 1 3/32" Pitch of stays 18" x 14" How are stays secured 2 nuts & washers Working pressure by rules 185 lbs. Material of stays Steel
 Diameter at smallest part 2 1/16" Area supported by each stay 306" Working pressure by rules 185 lbs. Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 1 3/16" Greatest pitch of stays 10 3/4" Working pressure of plate by rules 195 lbs.
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 1/2" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 9.8"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 191 lbs. 20 1/2 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2" x 1 1/2" Length as per rule 30 5/8" Distance apart 8 1/2" Number and pitch of Stays in each 3: 1 1/2"
 Working pressure by rules 180 lbs. 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 _____ 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 _____

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011071-011078-0262

DONKEY BOILER— No. _____ 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 _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____

Plates _____

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,
 SCOTT'S SHIPBUILDING COMPANY LIMITED
 Manufacturer.

[Signature]
 Assistant Secretary.

Dates of Survey while building

During progress of work in shops During erection on board vessel Total No. of visits	} } }	1904. May 23. 30. June 3. 14. 23. 27. July 26. 29. Aug 3. 8. 11. 16. 18. 22. 29. Sep 5. 13.	Is the approved plan of main boiler forwarded herewith <u>Yes.</u> " " " donkey " " "
		23. 29. Oct 5. 10. 14. 18. 20. 31. Nov 2. 8. 11. 16. 21. 28. Dec 2. 7. 9. 12. 14. 16. 19. 21. 23. 26. 28. 30. 1905. Jan 16. Feb 2.	
		March 23	

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

The main Boilers of this vessel have been built under special survey and the materials and workmanship are good.

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee. £	:	:	When applied for,
Special	:	:19.....
Donkey Boiler Fee	:	:	When received,
Travelling Expenses (if any) £	:	:19.....

[Signature]
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Glasgow 3- APR 1905

Assigned See accompanying Gen. reports

