

REPORT ON MACHINERY.

No. 14223.

Port of Greenock

Received at London Office 10-3 4 APR 1905

Survey held at Greenock

Date, first Survey 20th June 1904

Last Survey 24th March 1905

Book. Steel S.S. "River Clyde" (Russell & Co. No 537)

(Number of Visits 100)

Tons { Gross 3900
Net 2500

er Bryce Built at Port Glasgow By whom built Russell & Co.

When built 1905

nes made at Greenock By whom made J. G. Kincaid & Co.

when made 1905

rs made at Do. By whom made Scott & Co.

when made 1905

stered Horse Power Owners The S.S. "River Clyde" Co. (Ormond Cook & Co. Mgrs.) Port belonging to Glasgow

Horse Power as per Section 28 350 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

INES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
of Cylinders 25" - 41" + 67" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft as per rule 13.56 Material of screw shaft Iron

screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight

propeller boss yes 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 ✓ If two

shafts are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 60"

Dia. of Tunnel shaft as per rule 12.68 Dia. of Crank shaft journals as per rule 13.32 Dia. of Crank pin 13 1/2 Size of Crank webs 20 x 8 3/4 Dia. of thrust shaft under

cranks 13 1/2 Dia. of screw 17-6 Pitch of screw 17-3 No. of blades 4 State whether moveable No Total surface 95 sq. ft.

of Feed pumps 1 Diameter of ditto 3 1/2 Stroke 30" Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 4 Stroke 30" Can one be overhauled while the other is at work yes

of Donkey Engines Two Sizes of Pumps 12 x 10 + 8 in. Duplex 4 1/2 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Four - 3 1/2 bore In Holds, &c. No 1 hold 2 - 3 1/2, No 2 hold 2 - 3 1/2, No 4 hold

1 - 3 1/2, No 5 hold 2 - 3 1/2, Tunnel well 1 - 2 1/2. of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump Cir. p. Is a separate donkey suction fitted in Engine room & size yes - 3 1/2

all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible ✓

all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

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

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

at pipes are carried through the bunkers bilge pipes How are they protected wood casing

all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes

the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes

when stern tube, propeller, screw shaft, and all connections examined in dry dock launched Is the screw shaft tunnel watertight yes

it fitted with a watertight door yes worked from upper deck.

FLERS, &c.— (Letter for record) Total Heating Surface of Boilers Is forced draft fitted

and Description of Boilers Working Pressure Tested by hydraulic pressure to

Can each boiler be worked separately yes Area of fire grate in each boiler No. and Description of safety valves to

boiler Area of each valve 8.29 sq. ft. Pressure to which they are adjusted 182 lbs. Are they fitted with easing gear yes

Greatest distance between boilers or uptakes and bunkers or woodwork 15' Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are they welded or flanged Descrip. of riveting: cir. seams long. seams

Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Material of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Thickness of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space:

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of stays

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom

Diameter at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Thickness across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

Thickness of girder at centre Length as per rule Distance apart Number and pitch of Stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler 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

Material 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. _____ Description _____
 Made at Glasgow By whom Barelay, Curle & Co. When made _____ Where fixed on deck
 Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves Direct spring
 No. of safety valves Two Area of each 5.94 Pressure to which they are adjusted 80 lbs. If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no 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:— 1 Propeller, 3 c/sr. escape valves & springs, 12 shaft coupling bolts & nuts, 2 con. rod, 2 piston rod, 2 main bearing, 6 holding down, 6 junk ring & 6 c/sr. cover bolts & nuts, 2 feed + 2 bilge pump valves, 1 feed escape valve & spring, 1/2 set main fire bars, 12 boiler + 50 condenser tubes, 120 condenser ferrules, 1 set of safety valve springs.

The foregoing is a correct description,
Jhu. G. Kinnaird & Co. Manufacturer.

Dates of Survey while building	During progress of work in shops—	1904 June 20. 29. July 4. 5. Oct 25. 27. 28. 31. Nov 2. 3. 4. 7. 8. 9. 10. 12. 15. 16. 17. 18. 19. 21. 22. 23. 24. 25.
		28. 29. Dec 1. 2. 5. 6. 7. 8. 9. 12. 13. 14. 15. 16. 19. 20. 21. 22. 23. 26. 27. 28. 29. 30. 1905 Jan 5. 6. 7. 9. 10. 11. 12. 13. 14. 16. 17. 18. 19.
		20. 23. 24. 25. 26. 27. 28. 30. Feb 6. 7. 8. 9. 10. 11. 13. 14. 15. 18. 20. 21. 22. 24. 25. 27. 28. Mar 1. 2. 3. 6. 7. 8. 9. 10. 21. 22.
	During erection on board vessel —	
	Total No. of visits.	<u>100.</u>

Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " Yes.

General Remarks (State quality of workmanship, opinions as to class, &c. Workmanship and material good.)
The machinery was built under special survey. The main steam pipes were tested to 360 lbs. hyd. press. & found tight. The engines and boilers are efficiently fitted on board and, on a full steam trial, were found to work satisfactorily. The machinery is now in safe working condition and eligible, in my opinion, to have the notification of +L.M.C. 3.05 entered in the Register Book.

Marks on main boilers— Nº 668 Lloyd's test. 360 lbs. 16/1/05. W.R.A.

It is submitted that this vessel is eligible for THE RECORD. +L.M.C. 3.05

J.S.M.
5.4.05
R.S.
5.4.05

The amount of Entry Fee..	£ 3 :	When applied for,	
Special	£ 87 . 10	29/3/1905	
Donkey Boiler Fee .. .	£	When received,	
Travelling Expenses (if any) £		31/3/1905	

R. Elliott
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Glasgow 3 - APR 1905
 Assigned + L.M.C. 3.05

Greenwell

Certificate (if required) to be sent to

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

