

REPORT ON MACHINERY.

Port of Greenock

Received at London Office MON FEB 17 1896

No. in Survey held at Greenock & Port Glasgow Date, first Survey 19th Sept. 1895 Last Survey 17th July 1896
Book. Supplement 70 on the Twin Screw Steamer "Laura Sodre" (Number of Visits 76)

Registered Tonnage 472 Gross 321 Net
When built 1896

Builder Port Glasgow By whom built Russell & Co.
Engines made at Greenock By whom made John G. Kincaid & Co. when made 1896
Boilers made at Glasgow By whom made Lindsay Burnet & Co. when made 1895-12

Registered Horse Power 85 Owners Amoyan S. N. Co. (Lim?) Port belonging to Para
Horse Power as per Section 28 78

ENGINES, &c. — Description of Engines Inverted Direct acting Triple expansion No. of Cylinders Six
Diameter of Cylinders Two 10" Two 16" Two 26" Length of Stroke 21" Revolutions per minute 180 Diameter of Screw shaft 4.99"
Diameter of Tunnel shaft 4.74" Diameter of Crank shaft journals 5 1/8" Diameter of Crank pin 5 1/8" Size of Crank webs 6 3/4" x 7 x 3 1/2"
Diameter of screws 5.9" Pitch of screws 8.6" No. of blades Three State whether moveable yes Total surface 13.12 feet in each
of Feed pumps one each engine Diameter of ditto 2 1/2" Stroke 10 1/2" Can one be overhauled while the other is at work yes
of Bilge pumps one each engine Diameter of ditto 2 1/2" Stroke 10 1/2" Can one be overhauled while the other is at work yes
of Donkey Engines Two duplex Sizes of Pumps 4x6" & 2x6" No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room Two 2" In Holds, &c. Various

of bilge injections Two sizes 2 3/4" Connected to condenser, or to circulating pump as pumps Is a separate donkey suction fitted in Engine room & size 2"
Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible yes
Are the discharge pipes above or below the deep water line marked
Are the blow off cocks fitted with a spigot and brass covering plate yes
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
Is the screw shaft tunnel watertight no tunnels
Is the screw shaft tunnel watertight small iron casings fitted over shaft

BOILERS, &c. — (Letter for record see Glasgow Report attached) Total Heating Surface of Boilers
and Description of Boilers see Glasgow Report attached Working Pressure _____ Tested by hydraulic pressure to _____
Can each boiler be worked separately _____ Area of fire grate in each boiler _____ No. and Description of safety valves to _____
Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted _____
Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean diameter of boilers _____
Material of shell plates _____ Thickness _____ Description of riveting: circum. seams _____ long. seams _____
Pitch of rivets _____ Lap of plates or width of butt straps _____
Working pressure of shell by rules _____ Size of manhole in shell _____
No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____
Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____
Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____
How are stays secured _____ Working pressure by rules _____ Material of stays _____
Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
Greatest pitch of stays _____ Working pressure of plate by rules _____
Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
Girders to Chamber tops: Material _____ Depth and _____
Distance apart _____ Number and pitch of Stays in each _____
Can the superheater be shut off and the boiler worked _____
Material of flue plates _____ Thickness _____
End plates: Thickness _____ How stayed _____
Are they fitted with easing gear _____

DONKEY BOILER— Description *see Newcastle Surveyor's Report attached.*

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 boiler
enter the donkey boiler _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
Description of riveting long seams _____ Diameter 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
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 Piston for each size of Cylinder. 1 Connecting rod complete. 1 Piston rod complete. 3 Slide Valve Spindles. 1 Circulating pump piston & rod. 1 Cylinder cover for each size Cylinder. 1 Tail shaft in two lengths with flange couplings. 1 Boss & 25 Steel blades. 1 intermediate shaft. 1 crank shaft. 1 set feed & bridge.*

The foregoing is a correct description,
John G. Knocid & Co Manufacturer.

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

These Engines have been specially surveyed during cutting workmanship good. Main steam pipes tested by hydraulic pressure to 32 lbs per sq inch satisfactory. The Engines & Boilers are satisfactorily fitted in place and have been tested under full steam. They are now in good order and safe working condition and are in my opinion eligible to be noted in the Book L.M.C. 2.96

Spare gear continued.

1 set Air & Circulating pump valves. 1 set piston springs. 1 set Crank pin & brass. 1 set eccentric brasses. 1 set liners for thrust collars. 1 set springs for safety valves on main boiler. 1 do for escape valves on Cylinder & pumps. 1 set safety valves. 1 set valves. 2 Main bearing bolts for each Engine. 1 set coupling bolts for each Engine. 1 set chest studs. 12 junk ring bolts. 1 set studs for Air & Circulating pumps. 1 air pump. 2 spare bushes for stem tubes. 12 studs & nuts for Cylinder covers. 1 set oil in lubricator gear for one set Engines. 1 set Condenser tubes with packing glands. 1 set feed air receivers for main boiler.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 2.96.

H.S. 17.2.96 P.M.S. 17.2.96

Certificate (if required) to be sent to *H. Knocid*

The amount of Entry Fee. £ 1 : " : " : When applied for, _____
Special due to L.M.C. account £ 14 : " : " : _____
Donkey Boiler Fee £ " : " : " : _____
Travelling Expenses (if any) £ " : " : " : _____

A. G. Heron
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping
Greenock District

Committee's Minute **TUES. FEB 18 1896**

Assigned *+ L.M.C. 2.96*

MACHINERY CERTIFICATE WRITTEN



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