

REPORT ON MACHINERY

No. 25119
TUES. 14 MAY 1907Port of *Glasgow*

Received at London Office THUR. 18 APR. 1907

Date, first Survey *12 Feb'y 06* Last Survey *12 Feb'y 07*No. in Survey held at *Glasgow*

Reg. Book.

126 on the *S.S. "Strathgyle"*

Master

Built at *Port Glasgow*By whom built *A. Rodger & Co.*Tons { Gross
NetWhen built *1907*Engines made at *Glasgow*By whom made *A. Rodger & Co.*when made *1907*Boilers made at *do*By whom made *Lindray, Burnell & Co.*when made *1907*

Registered Horse Power

Owners *Burrell & Son, Glasgow*Port belonging to *Glasgow*Nom. Horse Power as per Section 28 *354*Is Refrigerating Machinery fitted for cargo purposes *no*Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines

*Triple Expansion*No. of Cylinders *3*No. of Cranks *3*Dia. of Cylinders *25"-41"-68"* Length of Stroke *28"* Revs. per minute *70* Dia. of Screw shaft *as per rule 14.29* Material of screw shaft *Iron*Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes* Is the after end of the liner made water tightin the 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *Yes* If twoliners are fitted, is the shaft lapped or protected between the liners *—* Length of stern bush *4'-10"*Dia. of Tunnel shaft *as per rule 12.69* Dia. of Crank shaft journals *as per rule 13.33* Dia. of Crank pin *13 7/8"* Size of Crank webs *8 3/4"* Dia. of thrust shaft undercollars *13 7/8"* Dia. of screw *17'-6"* Pitch of Screw *17'-9"* No. of Blades *4* State whether moveable *4* Total surface *95'*No. of Feed pumps *2* Diameter of ditto *4"* Stroke *24"* Can one be overhauled while the other is at work *Yes*No. of Bilge pumps *2* Diameter of ditto *4"* Stroke *24"* Can one be overhauled while the other is at work *Yes*No. of Donkey Engines *3* Sizes of Pumps *10" x 11" x 10", 8" x 5" x 8", 5" x 3 1/2" x 6"* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *3 - 3 1/2"* In Holds, &c. *2 - 3 1/2" each hold*No. of Bilge Injections *1* sizes *6"* Connected to condenser, or to circulating pump *—* Is a separate Donkey Suction fitted in Engine room & size *Yes 3 1/2"*Are 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 *—*Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Both*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 *about*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 *none* How are they protected *—*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 *Yes*Dates of examination of completion of fitting of Sea Connections *2* of Stern Tube *2* Screw shaft and Propeller *See R.R. Rpt.*Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from *Top of mainmast*BOILERS, &c.—(Letter for record *(S)*) Manufacturers of Steel *See R.R. Rpt. of Scotland. J. & W. Williams & Son*Total Heating Surface of Boilers *5544'* Is Forced Draft fitted *no* No. and Description of Boilers *3 Single Ended*Working Pressure *180 lb* Tested by hydraulic pressure to *360 lb* Date of test *15/10/06* No. of Certificate *8429 A.L.J.*Can each boiler be worked separately *Yes* Area of fire grate in each boiler *56 1/4'* No. and Description of Safety Valves toeach boiler *2 Lockdown* Area of each valve *5.9"* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *Yes*Smallest distance between boilers or uptakes and bunkers or woodwork *7 ft* Mean dia. of boilers *14'-0"* Length *11'-0"* Material of shell plates *slut*Thickness *1 7/32"* Range of tensile strength *28/32* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *D.R.L.*long. seams *D.B.S.* Diameter of rivet holes in long. seams *1 7/32"* Pitch of rivets *8 7/16" x 4 7/32"* Lap of plates or width of butt straps *1'-5 3/4"*Per centages of strength of longitudinal joint rivets *87.6* plate *85.53* Working pressure of shell by rules *183 lb* Size of manhole in shell *16" x 12"*Size of compensating ring *Flanged* No. and Description of Furnaces in each boiler *3 Diagonal* Material *slut* Outside diameter *44"*Length of plain part top *—* bottom *—* Thickness of plates crown *1 7/32"* Description of longitudinal joint *weld* No. of strengthening rings *—*Working pressure of furnace by the rules *186* Combustion chamber plates: Material *slut* Thickness: Sides *2 1/32"* Back *7/8"* Top *2 1/32"* Bottom *7/8"*Pitch of stays to ditto: Sides *9 1/4" x 8 3/4"* Back *9" x 8 3/4"* Top *9" x 8 3/4"* If stays are fitted with nuts or riveted heads *none* Working pressure by rules *184*Material of stays *slut* Diameter at smallest part *1.725"* Area supported by each stay *9 1/4" x 8 3/4"* Working pressure by rules *180* End plates in steam space:Material *slut* Thickness *1 5/32"* Pitch of stays *18" x 17 3/4"* How are stays secured *2.7 in.* Working pressure by rules *188* Material of stays *slut*Diameter at smallest part *5.78"* Area supported by each stay *18" x 17 3/4"* Working pressure by rules *181* Material of Front plates at bottom *slut*Thickness *13/16"* Material of Lower back plate *slut* Thickness *3/4"* Greatest pitch of stays *14"* Working pressure of plate by rules *180*Diameter of tubes *3 1/4"* Pitch of tubes *4 3/4" x 4 3/8"* Material of tube plates *slut* Thickness: Front *13/16"* Back *13/16"* Mean pitch of stays *10 9/16"*Pitch across wide water spaces *14"* Working pressures by rules *180 lb* Girders to Chamber tops: Material *slut* Depth andthickness of girder at centre *8" x 1 3/4"* Length as per rule *30 1/2"* Distance apart *9"* Number and pitch of stays in each *2 - 8 3/8"*Working pressure by rules *183 lb* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler workedseparately *—* 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

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *None* Description *None*
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 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 _____ Plates _____
 Working pressure of shell by rules _____ 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 _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Propeller shaft, propeller, two top end bolts, 2 bottom end bolts, set of coupling bolts, feed & bridge valves, 2 main bearing bolts, etc.*

The foregoing is a correct description,

A. Rodgers & Co. Manufacturer.

Dates of Survey while building
 During progress of work in shops— *1906: Feb 12 Mar 12 May 4 24 July 7 9 11 Aug 1 16 31 Sep 5 28 Oct 5 11 22*
 During erection on board vessel— *Nov 13 30 Dec 20 27 30 1907 Jan 7 14 16 21 24 Feb 6 7 19 Mar 13 26*
 Total No. of visits *20* Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders *12. 1206* Slides *12. 1206* Covers *12. 1206* Pistons *12. 12 06* Rods *6. 12. 06*
 Connecting rods *6-12 06* Crank shaft *6-12 06* Thrust shaft *6-12 06* Tunnel shafts *16-1 07* Screw shaft *16-1-07* Propeller *16-1-07*
 Stern tube *16-1-07* Steam pipes tested *19. 3. 07* Engine and boiler seatings *13. 3 06* Engines holding down bolts *19/3/07*
 Completion of pumping arrangements *19/3/07* Boilers fixed *19/3/07* Engines tried under steam *26/3/06*
 Main boiler safety valves adjusted *18/3/07* Thickness of adjusting washers *7/16 1 3/4*
 Material of Crank shaft *steel* Identification Mark on Do. *(M.C.)* Material of Thrust shaft *steel* Identification Mark on Do. *(M.C.)*
 Material of Tunnel shafts *steel* Identification Marks on Do. *(M.C.)* Material of Screw shafts *Iron* Identification Marks on Do. *16-1 07*
 Material of Steam Pipes *Copper* Test pressure *36.0 lb.*

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

Three engines & boilers have been constructed under Special Survey & excepting as stated below are of good materials & workmanship & have been satisfactorily tried under steam. On the trial trip one of the Condenser Tube plates was found to be defective. Temporary repairs were carried out to enable the vessel to proceed to Bremen where a new tube plate is to be fitted & the Hamburg Surveyors have been advised.

This vessel will in our opinion be eligible to have notation \star L M C 3, 07 subject to the above new tube plate has been fitted. being examined at the first convenient opportunity. See letter from Messrs A Rodgers & Co. attached stating that new tube plate has been fitted & tested.

It is submitted that this vessel will be eligible for the record \star L M C 3, 07 when the condenser tube plate has been examined.

The amount of Entry Fee. £ *3* : : When applied for. *15 APR 1907*
 Special .. £ *27* . *14* : :
 Donkey Boiler Fee .. £ : : When received. *14/5/07*
 Travelling Expenses (if any) £ : : *15/5/07*

Committee's Minute

Assigned

Glasgow 15 APR 1907

+ L.M.C. 3, 07
When do.

H. Sandercock Smith, Wm. Gordon Maclean
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Glasgow 17 MAY 1907

+ L.M.C. 3, 07

TUES. 31 DEC. 1907

MACHINERY CERTIFICATE
 WRITTEN 14-5-07

Subject to
 Lloyd's Register
 Foundation