

## REPORT ON MACHINERY.

No. 32995

Received at London Office WED. AUG 6-1913

of writing Report 18. 7. 1913. When handed in at Local Office

19 Port of Glasgow

in Survey held at Coatlodge Glasgow Date, First Survey 2<sup>nd</sup> Nov. 1912 Last Survey 14. 7. 1913.

Book. on the S.S. Collairnie (Number of Visits 27) Gross 435 Tons Net 170.

ster Alex. R. Pirie Built at Ardrossan By whom built Ardrossan Dry Dock Co. (253) When built 1913

ines made at Coatlodge By whom made W. &amp; E. Ridgerwood (399) when made 1913

lers made at Glasgow By whom made D. Rowan &amp; Co (189) when made 1913

istered Horse Power Owners Geo. Elmie &amp; Son, Aberdeen Port belonging to Aberdeen

n. Horse Power as per Section 28 76 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

GINES, &amp;c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

u. of Cylinders 12 1/2 1 1/2 34 Length of Stroke 24 Revs. per minute 72 Dia. of Screw shaft as per rule 7 1/2 as fitted 7 1/2 Material of iron screw shaft

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 tight

the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part

been the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

ers are fitted, is the shaft lapped or protected between the liners Length of stern bush 2-9

u. of Tunnel shaft as per rule 6 1/2 6 1/4 Dia. of Crank shaft journals as per rule 6 1/2 as fitted 6 1/2 Dia. of Crank pin 6 3/8 Size of Crank webs 25 1/2 x 4 1/2 Dia. of thrust shaft under

bars 6 3/8 Dia. of screw 9-6 Pitch of Screw 11 6 No. of Blades 4 State whether moveable No Total surface 32 1/2

of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

of Donkey Engines one Sizes of Pumps 6 x 4 1/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room two 1 In Holds, &amp;c. (3) 2 9 (1) 3 in fore peak

of Bilge Injections 1 sizes 3 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room &amp; size Yes 2

e 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 No

e all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

e 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

e 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

hat pipes are carried through the bunkers No How are they protected

e all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

e the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

ates of examination of completion of fitting of Sea Connections 13/6/13 of Stern Tube 13/6/13 Screw shaft and Propeller 13/6/13

the Screw Shaft Tunnel watertight No Is it fitted with a watertight door Yes worked from

ILERS, &amp;c.—(Letter for record S) Manufacturers of Steel

otal Heating Surface of Boilers 1354 Is Forced Draft fitted No No. and Description of Boilers

orking Pressure 180 Tested by hydraulic pressure to Date of test 36.5 No. of Certificate

in each boiler be worked separately Area of fire grate in each boiler 407 No. and Description of Safety Valves to

ch boiler 1 pair direct Spring Area of each valve 4.9 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

nallest distance between boilers or uptakes and bunkers or woodwork 9 Mean dia. of boilers Length Material of shell plates

hickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

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

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

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

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

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

itch of stays to ditto: Sides Back Top If stays are fitted with nuts or steered heads Working pressure by rules

aterial of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

aterial Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

iameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

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

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

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

ickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

orking pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

eparately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

oles 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

orking pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

003065-003074



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. 1 Description *Cochran's Patent.*  
 Made at *Amman* By whom made *Cochran & Co Amman Ltd* When made *1913* Where fixed *in Scotland*  
 Working pressure *100* tested by hydraulic pressure to — Date of test — No. of Certificate — Fire grate area *11 3/4* Description of  
 Valves *Spring loaded* No. of Safety Valves *1* Area of each *4.91* Pressure to which they are adjusted *105 lb* Date of adjustment *14.7.*  
 If fitted with casing 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  
 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 — Radius of do. — Stayed by —  
 Diameter of uptake — Thickness of uptake plates — Thickness of water tubes — Dates of survey —

SPARE GEAR. State the articles supplied:— *2 top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed and bidge pump valves, screw bolts & nuts various sizes.*

The foregoing is a correct description,

For *W. Y. Y. Lidgerwood* Manufacturer. *R. Sneddon*

Dates of Survey while building { During progress of work in shops -- 1912 Nov. 21-25 1913 Jan 16-28 10 Feb 4-10-28 Mar 7-17-28 Apr 4-15-28 May 18-21-22-23-25 Jun 6-15-17-25 July 2-7-14  
 During erection on board vessel --  
 Total No. of visits *27*

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders *29/4/13* Slides *21/5/13* Covers *29/4/13* Pistons *29/4/13* Rods *29/4/13*  
 Connecting rods *29/4/13* Crank shaft *21/5/13* Thrust shaft *21/5/13* Tunnel shafts — Screw shaft *21/5/13* Propeller *21/5/13*  
 Stern tube *21/5/13* Steam pipes tested *2/7/13* Engine and boiler seatings *23/5/13* Engines holding down bolts *26/6/13*  
 Completion of pumping arrangements *7/7/13* Boilers fixed *25/6/13* Engines tried under steam *7/7/13*  
 Main boiler safety valves adjusted *7/7/13* Thickness of adjusting washers *50 1/2 P. 4"*  
 Material of Crank shaft *Steel* Identification Mark on Do. *3222 21/5/13* Material of Thrust shaft *Steel* Identification Mark on Do. *3223 21/5/13*  
 Material of Tunnel shafts *Iron* Identification Marks on Do. — Material of Screw shafts *Iron* Identification Marks on Do. *3228 21/5/13*  
 Material of Steam Pipes *S.D. Copper* Test pressure *360*

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

*These Engines and boilers have been built under special survey the materials and workmanship are of good description they have been well fitted on board and tried under steam. This machinery is now in our opinion eligible to have notification of L.M.C. 7.13. in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.13.

*T.J.S. 7.8.13.*

*W.R.*

The amount of Entry Fee .. £ / : : When applied for, *25-7-1913*  
 Special .. £ *11.8* : :  
 Donkey Boiler Fee .. £ : : When received, *2-8-1913*  
 Travelling Expenses (if any) £ : :

*A.M. McLeod & A.H. Pilditch.*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute *GLASGOW* 5 - AUG. 1913

Assigned + L.M.C. 7.13.

MACHINERY CERTIFICATE  
 WRITTEN 6.8.13



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