

REPORT ON MACHINERY.

No. 382 75.

Received at London Office WED. 30 OCT. 1918

Date of writing Report

10

When handed in at Local Office

10

Port of Glasgow

No. in Survey held at Glasgow

Date, First Survey 5th April 1914 Last Survey 23rd Oct 1918

Reg. Book.

(Number of Visits 51)

on the S.S. "Argirvan"

Tons } Gross
Net

Master Built at Campbelltown By whom built Campbelltown When built 1918

Engines made at Glasgow By whom made Ross & Duncan. Ings No 1029 when made 1918

Boilers made at Glasgow By whom made Ross & Duncan Bldg Nos 1536-37 when made 1918

Registered Horse Power Owners Lang & Fulton Ltd. Ings. Port belonging to Greenock

Nom. Horse Power as per Section 28 142 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 18 x 27 1/2 x 45 Length of Stroke 33 Revs. per minute 80 Dia. of Screw shaft as per rule 9 3/8 9 3/8 as fitted 9 1/4 Material of screw shaft S.

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 tight

in the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 40"

Dia. of Tunnel shaft as per rule 8 8/16 8 7/8 Dia. of Crank shaft journals as per rule 9 28 9 29 as fitted 9 3/8 Dia. of Crank pin 9 1/2 Size of Crank webs 17 1/2 x 6 1/2 Dia. of thrust shaft under

collars 9 3/8 Dia. of screw 12 1/2 Pitch of Screw 18 1/2 No. of Blades 4 State whether moveable No Total surface 52 sq ft

No. of Feed pumps 2 Diameter of ditto 3 Stroke 16 1/2 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 Stroke 16 1/2 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps 6 x 4 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 2 1/4" + one in Tunnel 2 1/4" In Holds, &c. Fore Hold. 2 - 2 1/4" After Hold. 1 - 2 1/2"

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 2 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 None

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 Above

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 Forward bilge suction How are they protected Boxed in.

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 Greenock Rpt of Stern Tube Greenock Rpt Screw shaft and Propeller Greenock Rpt

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville & Sons.

Total Heating Surface of Boilers 2386 sq ft Is Forced Draft fitted No No. and Description of Boilers Two built Single ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 26-8-18 No. of Certificate 144 28

Can each boiler be worked separately Yes Area of fire grate in each boiler 39.5 sq ft No. and Description of Safety Valves to

each boiler Two Spring loaded Area of each valve 3.96 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers on uptakes and bunkers 9" INS Mean dia. of boilers 11'-6" Length 10'-6" Material of shell plates S

Thickness 31/32" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L.D.R.

long. seams T.P.D.S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6 7/8 Length of plates width of butt straps 17 1/2"

Per centages of strength of longitudinal joint rivets 88.5 plate 83.6 Working pressure of shell by rules 180 lbs Size of manhole in shell 16 x 12"

Size of compensating ring 7 x 31/32" No. and Description of Furnaces in each boiler Two Corrugated Material S Outside diameter 46 1/4"

Length of plain part top bottom Thickness of plates crown bottom 9 1/16 Description of longitudinal joint Weld No. of strengthening rings None

Working pressure of furnace by the rules 190 lbs Combustion chamber plates: Material S Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 11/16"

Pitch of stays to ditto: Sides 8 3/4 x 7 3/8 Back 8 3/4 x 8 1/4 Top 8 1/2 x 7 3/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 187

Material of stays S Area at smallest part 1.76 Area supported by each stay 72 sq in Working pressure by rules 217 End plates in steam space

Material S Thickness 31/32" Pitch of stays 16 3/8 x 14 1/2 How are stays secured D. nuts Working pressure by rules 180 lbs Material of stays S

Area at smallest part 4.48 Area supported by each stay 248 Working pressure by rules 186 Material of Front plates at bottom S

Thickness 27/32" Material of Lower back plate S Thickness 27/32" Greatest pitch of stays 13 1/2 x 8 3/4 Working pressure of plate by rules 190

Diameter of tubes 3 1/4" Pitch of tubes 4 1/4 x 4 3/8 Material of tube plates S Thickness: Front 27/32" Back 3/4" Mean pitch of stays 9.9

Pitch across wide water spaces 14" Working pressures by rules 206 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 7 3/4 x 13 1/4 Length as per rule 30 5/8 Distance apart 8 1/2 Number and pitch of stays in each Three 7 3/4"

Working pressure by rules 182 Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked

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

holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes

If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes

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

002515-002521-0081

002515-002521-0082

VERTICAL DONKEY BOILER—

Manufacturers of Steel

no donkey boiler.

No.	Description				
Made at	By whom made		When made	Where fitted	
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	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:— 1 set each of top & bottom end, main bearing & coupling bolts & nuts, feed, ridge, air & circulating pump valves. 1 spring each for feed & ridge pump relief valves. 1 C.I. propeller, assorted bar iron, nuts & bolts.

The foregoing is a correct description,

Ross Duncan

Manufacturer.

Dates of Survey: During progress of work in shops: 1918 Apr. 5-18, June 20, July 11, Aug 3, Sept 26, Oct 3, 1918 Jan 23, 29, Feb 28, Mar 21, 24, 29, Apr 3, 5, 13, 22. During erection on board vessel: May 2, 7, 10, 16, 17, 20, 24, 28, 30, 31, June 10, 14, 17, 21, 25, 28, July 2, 4, 8, 26, 30, Aug 2, 5, 6, 9, 21, 26, 30, Oct 7, 11, 15, 18, 23. Total No. of visits: 51. Is the approved plan of main boiler forwarded herewith: Yes

Dates of Examination of principal parts—Cylinders 13-8-18 Slides 2-8-18 Covers 9-8-18 Pistons 10-6-18 Rods 10-6-18 Connecting rods 10-6-18 Crank shaft 28-5-18 Thrust shaft 25-6-18 Tunnel shafts 21-8-18 Screw shaft 13-8-18 Propeller 13-8-18 Stern tube 30-8-18 Steam pipes tested 11-10-18. Engine and boiler seatings Greenock Rpt Engines holding down bolts 4-10-18 Completion of pumping arrangements 23-10-18 Boilers fixed 4-10-18 Engines tried under steam 23-10-18 Main boiler safety valves adjusted 18-10-18 Thickness of adjusting washers PORT. 3/8" P. 5/16" S. STAR. 3/8" P. 1/32" S. Material of Crank shaft S Identification Mark on Do. LLOYDS. N°1029 Material of Thrust shaft S Identification Mark on Do. LLOYDS. N°1029 Material of Tunnel shafts S Identification Marks on Do. 21-8-18. J.E.S. Material of Screw shafts S Identification Marks on Do. 13-8-18. J.E.S. Material of Steam Pipes Seamless Copper 3 3/4" INT DIA. No 7. W.G. Test pressure 360 lbs.

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

This machinery is a duplicate of the same Builders has no 1021. "S.S. Ardgarra". Rpt no 34999.

These engines & boilers have been built under Special Survey, the materials and workmanship are sound & good. They have been fitted on board in an efficient manner, tried under working conditions and found satisfactory, and are eligible in my opinion to be classed with record of L.M.C. 10-18.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.18

2-11-18

The amount of Entry Fee .. £ 2 : 0 : 0 When applied for, Special .. £ 21 : 6 : 0 29-10-18 Donkey Boiler Fee .. £ : : : When received, Travelling Expenses (if any) £ : : : 31-10-18

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

Committee's Minute

GLASGOW

29 OCT 1918

Assigned

+ L.M.C. 10.18.

MACHINERY CERTIFICATE WRITTEN 30-10-18



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