

REPORT ON MACHINERY.

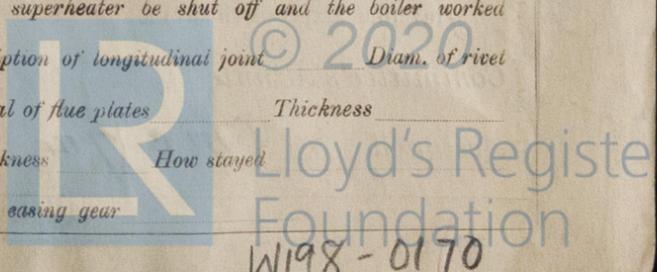
No. 34231

Received at London Office JUL. 29. 1914

Date of writing Report 27-7-14 When handed in at Local Office 14 Port of Glasgow
 Date, First Survey 1-4-14 Last Survey 15-7-14
 Survey held at Clydebank (Number of Visits 15)
 on the Steel screw tug "Wrestler" Gross Tons 192
 Built at Douling By whom built Scott Sons Net Tons ✓
 When built 1914
 Engines made at Clydebank By whom made Aitchison Blair Lim when made 1914
 Milers made at Glasgow By whom made Dunsmuir & Jackson Ltd. when made 1914
 Registered Horse Power 109 Owners Stel & Pinnie Port belonging to Glasgow
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Compound No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 21"-42" Length of Stroke 27" Revs. per minute 130 Dia. of Screw shaft 8.6" Material of screw shaft steel
 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
 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 part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two
 liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 2'-10 3/4"
 Dia. of Tunnel shaft 8.04" Dia. of Crank shaft journals 8.4" Dia. of Crank pin 8 1/2" Size of Crank webs 15 1/4" x 5 1/2" Dia. of thrust shaft under
 bars 8 1/2" Dia. of screw 9'-9" Pitch of Screw 11'-0" No. of Blades 3 State whether moveable no Total surface 33.9 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 3/8" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 2 3/8" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 1 Sizes of Pumps 6"-4" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 1 of 2" Stokehold 1 of 2" In Holds, &c. Crew space 1 of 2"
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump circul Is a separate Donkey Suction fitted in Engine room & size yes 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 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 25-6-14 of Stern Tube 25-6-14 Screw shaft and Propeller 25-6-14
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door — worked from —

MILLERS, &c.—(Letter for record) Manufacturers of Steel See separate report.
Boilers Is Forced Draft fitted — No. and Description of Boilers one single ended
 Working Pressure 120 lbs Tested by hydraulic pressure to — Date of test — No. of Certificate —
 Can each boiler be worked separately — Area of fire grate in each boiler — No. and Description of Safety Valves to
 each boiler 2 direct spring load Area of each valve 9.62 sq in Pressure to which they are adjusted 125 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers — Length — Material of shell plates
 Thickness — Range of tensile strength — Are the shell plates welded or flanged — Descrip. of riveting: cir. seams
 g. 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 — Working pressure of shell by rules — Size of manhole in shell
 No. of compensating ring — No. and Description of Furnaces in each boiler — Material — Outside diameter
 Length of plain part — Thickness of plates — Description of longitudinal joint — No. of strengthening rings
 Working pressure of furnace by the rules — Combustion chamber plates: Material — Thickness: Sides — Back — Top — Bottom
 Pitch of stays to ditto: Sides — Back — Top — If stays are fitted with nuts or riveted heads — Working pressure by rules
 Material of stays — Diameter at smallest part — Area supported by each stay — Working pressure by rules — End plates in steam space:
 Material — Thickness — Pitch of stays — How are stays secured — Working pressure by rules — Material of stays
 Diameter 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
 Diameter of tubes — Pitch of tubes — Material of tube plates — Thickness: Front — Back — Mean pitch of stays
 Pitch 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
 Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness
 Stays 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.	Description				
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		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, 2 bottom end, 2 main bearing and set of coupling bolts nuts. Set of feed and bilge pump valves. Assorted iron, bolts nuts.

The foregoing is a correct description,

Manufacturer.

AITCHISON, BLAIR LTD.

Archd. Blair

Dates of Survey while building: During progress of work in shops -- 1914. Apr 1-28. May 11-28. June 2-12-22-23-25-29. July 2-3-8-10-15.
 During erection on board vessel --- 15.
 Total No. of visits 15.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 28.4.14 11.5.14 Slides 2.6.14 Covers 28.5.14 Pistons 28.5.14 Rods 12.6.14
 Connecting rods 28.5.14 Crank shaft 2.6.14 Thrust shaft 2.6.14 Tunnel shafts 2.6.14 Screw shaft 12.6.14 Propeller 11.5.14
 Stern tube 28.5.14 Steam pipes tested 23.6.14 8.7.14 Engine and boiler seatings 25.6.14 Engines holding down bolts 8.7.14
 Completion of pumping arrangements 10.7.14 Boilers fixed 8.7.14 Engines tried under steam 15.7.14
 Main boiler safety valves adjusted 10.7.14 Thickness of adjusting washers PV $\frac{7}{16}$ SV $\frac{15}{32}$
 Material of Crank shaft steel Identification Mark on Do. 89 AC Material of Thrust shaft steel Identification Mark on Do. 89 AC
 Material of Tunnel shafts steel Identification Marks on Do. 89 AC Material of Screw shafts steel Identification Marks on Do. 89 AC
 Material of Steam Pipes Copper wrought iron Test pressure 300 lbs. 360 lbs.

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

The machinery of this vessel has been constructed under special survey in accordance with the rules and has been seen working satisfactorily under steam. Materials and workmanship are good.

This machinery is eligible in my opinion to be classed +LMC.7.14.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7. 14.

J.W.D.
29/7/14

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

The amount of Entry Fee .. £ 2 : 0 :
 Special 16-7-0 } .. £ 9 : 1 :
 less boiler fee 7-6-0 }
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :

Committee's Minute **GLASGOW 28 JUL 1914**

Assigned + LMC 7.14.



© 2020 Lloyd's Register Foundation
 Committee's Minute
 Assigned TRAN

GLASGOW

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

29/7/14

pt. 5a.
 Description of Safety
 No. in Survey he
 g. Book.
 on the
 ster
 gines made at
 lers made at
 istered Horse Po
 ULTITUBUL
 ter for record
 lers one Se
 of Certificate 12
 ty valves to each
 they fitted with e
 llest distance betu
 erial of shell plat
 rip. of riveting.
 of plates or widt
 123 Si
 3 plain
 ription of longitudi
 Port
 We requ
 w. Aitchison
 n. 89.
 Specially Surveyed
 We hereby
 For boilers u
 Horse Power, on
 above 200. The
 than £2 2s.
 MEM.—In e
 all cases where
 to be defrayed b
 No. B. 25
 This request is mad
 reign Shipping, u
 hile the Committee use
 od that neither the Com
 port or certificate issued
 or for any error of judg
 5-DEC-1913
 Secretary,
 Lloyd's Register
 GENERAL REM
 nder Sp
 cau o te
 us Boile
 survey Fee ...
 travelling Expenses