

REPORT ON MACHINERY.

No. 33900

Received at London Office

WED. APR. 29. 1914

Port of **GLASGOW**
 Date, First Survey **10-6-13** Last Survey **22-4-1914**
 Survey held at **Glasgow**
 on the **S/S "Oranian"**
 Master **R. P. Gettins** Built at **Glasgow** By whom built **Haber Miller**
 Engines made at **Glasgow** By whom made **Dunsmuir Jackson (H&B)** when made **1914**
 Milers made at **ditto** By whom made **ditto** when made **1914**
 Registered Horse Power _____ Owners **F. Leyland & Co.** Port belonging to **Liverpool**
 Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

GINES, & Co.—Description of Engines **Triple Expansion** No. of Cylinders **3** No. of Cranks **3**
 Dia. of Cylinders **25 1/2 - 12 1/2 - 7 1/2** Length of Stroke **48** Revs. per minute **72** Dia. of Screw shaft **14 5/8** 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
 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 _____
 Length of stern bush **5-3**
 Dia. of Tunnel shaft **13 3/8** Dia. of Crank shaft journals **14 05/8** Dia. of Crank pin **15** Size of Crank webs **2-5 1/4** Dia. of thrust shaft under
 rollers **15** Dia. of screw **1 1/3** Pitch of Screw **18-6** No. of Blades **4** State whether moveable **Yes** Total surface **92 1/2**
 No. of Feed pumps **2** Diameter of ditto **4 1/4** Stroke **26** Can one be overhauled while the other is at work **Yes**
 No. of Bilge pumps **2** Diameter of ditto **4 1/4** Stroke **26** Can one be overhauled while the other is at work **Yes**
 No. of Donkey Engines **4** Sizes of Pumps **2 1/2 Ball 9 1/2 10 1/2 10 1/2** No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room **2-3 1/2 Stokhold 2-3 1/2** In Holds, &c. **2-3 1/2 in each hold**
 No. of Bilge Injections **1** sizes **1 1/2** Connected to condenser, or to circulating pump **Yes** 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 **Yes**
 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 **below**
 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 **4-3-14** of Stern Tube **4-3-14** Screw shaft and Propeller **4-3-14**
 Is the Screw Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **Upper Platform**

OILERS, & Co.—(Letter for record) Manufacturers of Steel **Union Iron Works Co. Lancaster, Pa.**
 Total Heating Surface of Boilers **443 1/2** Is Forced Draft fitted **No** No. and Description of Boilers **3 Single Ended**
 Working Pressure **200** Tested by hydraulic pressure to **400** Date of test **28-1-14** No. of Certificate **125-19**
 Can each boiler be worked separately **Yes** Area of fire grate in each boiler **69 1/2** No. and Description of Safety Valves to
 each boiler **Double Spring** Area of each valve **4** Pressure to which they are adjusted **205** Are they fitted with easing gear **Yes**
 Smallest distance between boilers or uptakes and bunkers or woodwork **18** Mean dia. of boilers **15-10 7/8** Length **11-6** Material of shell plates **S**
 Thickness **1 3/8** Range of tensile strength **28/32** Are the shell plates welded or flanged **No** Descrip. of riveting: cir. seams **DR**
 long. seams **TRIDBS** Diameter of rivet holes in long. seams **17/16** Pitch of rivets **10 7/32** Lap of plates or width of butt straps **1-9 5/8**
 Per centages of strength of longitudinal joint **85 9/16** Working pressure of shell by rules **200** Size of manhole in shell **16 x 12**
 Size of compensating ring **8 1/2** No. and Description of Furnaces in each boiler **3 Moninon** Material **S** Outside diameter **4-2**
 Length of plain part **7 5/8** Thickness of plates **7 5/8** Description of longitudinal joint **weld** No. of strengthening rings _____
 Working pressure of furnace by the rules **201** Combustion chamber plates: Material **S** Thickness: Sides **1 1/16** Back **1 1/16** Top **1 1/16** Bottom **1 1/32**
 Pitch of stays to ditto: Sides **9 1/4 x 8 3/4** Back **9 x 8 5/8** Top **9 5/8 x 8 3/4** If stays are fitted with nuts or riveted heads **Both** Working pressure by rules **201**
 Material of stays **S** Diameter at smallest part **2 1/2** Area supported by each stay **8 1/2** Working pressure by rules **230** End plates in steam space:
 Material **S** Thickness **13/16** Pitch of stays **18 3/4 x 15 1/8** How are stays secured **DN** Working pressure by rules **209** Material of stays **S**
 Diameter at smallest part **5 7/8** Area supported by each stay **298** Working pressure by rules **202** Material of Front plates at bottom **S**
 Thickness **1 1/16** Material of Lower back plate **S** Thickness **1 3/16** Greatest pitch of stays **14 7/8 x 8 5/8** Working pressure of plate by rules **205**
 Diameter of tubes **3** Pitch of tubes **4 1/4 x 4 1/4** Material of tube plates **S** Thickness: Front **1 1/16** Back **7/8** Mean pitch of stays **10 5/8**
 Pitch across wide water spaces **14** Working pressures by rules **206** Girders to Chamber tops: Material **None** Depth and
 thickness of girder at centre **10 x 1 (2)** Length as per rule **34 1/2** Distance apart **9 1/8** Number and pitch of stays in each **3 at 8 3/4**
 Working pressure by rules **221** Superheater or Steam chest; how connected to boiler **Yes** Can the superheater be shut off and the boiler worked
 separately **Yes** 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 _____

Lloyd's Register Foundation

U205-0132

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 Connecting Rod bolts for bottom end, bolts for top end, 2 main bearing bolts
 1 set of coupling bolts, 1 set of Feed, Bilge Pump valves, 1 set of Portl. Rings, a quantity
 of assorted bolts, nuts, washers of various sizes.

The foregoing is a correct description,
James Fletcher Manufacturer.

Dates of Survey while building	During progress of work in shops	1914 June 10-16-24 July 16-21 Aug 6-11-26 Sept 7-8-12-18-22 Oct 2-9-14-20-27 Nov 3-10-14-19-20-2
	During erection on board vessel	1914 Jan 9-14-19-21-26-27-28-30 Feb 6-12-25 Mar 3-14-5-18-17-18-25-27 Apr 3-6-9-10-22
	Total No. of visits	54

Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " " *now*

Dates of Examination of principal parts—Cylinders 20-11-13 Slides 20-11-13 Covers 24-12-13 Pistons 20-11-13 Rods 31-10-13

Connecting rods 20-10-13 Crank shaft 9-10-13 Thrust shaft 11-8-13 Tunnel shafts 10-11-13 Screw shaft 14-1-14 Propeller 14-1-14

Stern tube 2-12-13 Steam pipes tested 6-2-14 Engine and boiler seatings 4-3-14 Engines holding down bolts 3-4-14

Completion of pumping arrangements 3-4-14 Boilers fixed 17-3-14 Engines tried under steam 22-4-14

Main boiler safety valves adjusted 3-4-14 Thickness of adjusting washers A 7/16 F 3/8 A 3/8 F 3/8 F 3/8 A 7/16

Material of Crank shaft *Iron* Identification Mark on Do. *LLOYDS 443* Material of Thrust shaft *Iron* Identification Mark on Do. *LLOYDS 443*

Material of Tunnel shafts *Iron* Identification Marks on Do. *WGM* Material of Screw shafts *Iron* Identification Marks on Do. *WGM*

Material of Steam Pipes *Iron* Test pressure 600 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.) These Engines & Boilers have been built under special survey in accordance with the approved plan & the workmanship & material are of good quality. The Machinery is eligible in my opinion for the Record of *L.M.C. 4-14*

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 4.14.

J.W.D. 30/4/14
G.P.R.

The amount of Entry Fee	£ 3 : -	When applied for,	
Special	£ 42 : 9	When received,	25/4/14
Donkey Boiler Fee	£ :		
Travelling Expenses (if any)	£ :		28/4/14

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

Committee's Minute **GLASGOW** 28 APR. 1914
 Assigned + L.M.C. 4, 14.

VI

These particulars

Signal Letters _____

Official Number _____

135,57

No., Date, and Port of Origin _____

Whether British or Foreign Built _____

British

Number of Decks _____

Number of Masts _____

Rigged _____

Stern _____

Build _____

Galleries _____

Head _____

Framework and vessel _____

Number of Bulkheads _____

Number of water tanks and their capacity _____

Total tonnage to quarter the depth to bottom of keel _____

No. of sets of Engines _____ Description _____

one Direct triple expansion

No. of Shafts _____ Particulars Description, Number, Iron or Steel, Loaded Pressure _____

one

Under Tonnage _____

Space or spaces between Turret or Trunk Forecastle ...

Bridge space

Poop or Break

Side Houses

Deck Houses

Chart House

Spaces for machinery Section 78 (2) 1894 ...

Excess of Hatch _____

Gross Tonnage _____

Deductions, as per Register _____

NOTE 1.—The tonnage Deck for ...

NOTE 2.—The under ...

Name of Owners _____

No. of Owners _____

Name, Residence _____

Frederick _____

Place of Manufacture _____

Dated 180 _____

(830), (69862) Wt.

GLASGOW

Certificate (if required) to be sent to

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

