

REPORT ON MACHINERY.

No. 35430

Received at London Office

WED. 8-SEP. 1915

Date of writing Report 19 When handed in at Local Office 19 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 22/2/15 Last Survey 25-8-1915
 Reg. Book. on the S.S. ALIDA (Dundee Ship by Co 78 & 45) (Number of Visits 23)
 Master Built at Dundee By whom built Dundee Shipbuilding Co Ltd When built 1915
 Engines made at Coatbridge By whom made William Beardmore & Co Ltd when made 1915
 Boilers made at Glasgow By whom made Dunsmuir & Jackson when made 1915
 Registered Horse Power Owners Port belonging to
 Nom. Horse Power as per Section 28 84.55 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 13 x 22 x 36 Length of Stroke 24 Revs. per minute 4.45 Dia. of Screw shaft 8 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 tight in the propeller boss yes If the liner is in more than one length are the joints turned no 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 no Length of stern bush 2-9
 Dia. of Tunnel shaft none Dia. of Crank shaft journals 4.11 Dia. of Crank pin 4 1/2 Size of Crank webs 1 1/4 x 4 1/4 Dia. of thrust shaft under collars 4 1/2 Dia. of screw 9-0 Pitch of Screw 11-6 No. of Blades 4 State whether moveable no Total surface 34 sq ft
 No. of Feed pumps 1 Diameter of ditto 2 7/8 Stroke 12 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 1 Diameter of ditto 2 7/8 Stroke 12 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 1 Sizes of Pumps 6 x 3 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2-2" Engine Room Hold & aft In Holds, &c. 3-2"
 No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump C.P. 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 yes
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves & Cocks
 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 yes
 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 no How are they protected no
 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 31-8-15 of Stern Tube 31-8-15 Screw shaft and Propeller 31-8-15
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door no worked from no

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel James Colville, Dunlop & Beardmore
 Total Heating Surface of Boilers 1542 sq ft Forced Draft fitted no No. and Description of Boilers 1 single ended marine
 Working Pressure 200 lb Tested by hydraulic pressure to 300 lb Date of test 25-8-15 No. of Certificate 1
 Can each boiler be worked separately no Area of fine grate in each boiler 100 sq ft No. and Description of Safety Valves to each boiler 1 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers, or woodwork 12 in Mean dia. of boilers 36 in Length 12 ft Material of shell plates steel
 Thickness 3/16 in Range of tensile strength 45,000 lb Are the shell plates welded or flanged no Descrip. of riveting: cir. seams no long. seams yes
 Diameter of rivet holes in long. seams 1/4 in Pitch of rivets 2 in Lap of plates or width of butt straps 1 in
 Per centages of strength of longitudinal joint rivets 85 Working pressure of shell by rules 200 lb Size of manhole in end 18 in
 Size of compensating ring 18 in No. and Description of Furnaces in each boiler No 3 4 8 3 Material steel Outside diameter 36 in
 Length of plain part top 12 ft Thickness of plates crown 3/16 in Description of longitudinal joint butt No. of strengthening rings 1
 Working pressure of furnace by the rules 200 lb Construction chamber plates: Material steel Thickness: Sides 3/16 in Back 3/16 in Top 3/16 in Bottom 3/16 in
 Pitch of stays to ditto: Sides 12 in Back 12 in Top 12 in If stays are fitted with nuts or riveted heads yes Working pressure by rules 200 lb
 Material of stay steel Diameter at smallest part 1/2 in Area supported by each stay 100 sq in Working pressure by rules 200 lb End plates in steam space: Material steel Thickness 3/16 in Pitch of stays 12 in How are stays secured with nuts Working pressure by rules 200 lb Material of stays steel
 Diameter at smallest part 1/2 in Area supported by each stay 100 sq in Working pressure by rules 200 lb Material of Front plates at bottom steel
 Thickness 3/16 in Material of Lower back plate steel Thickness 3/16 in Greatest pitch of stays 12 in Working pressure of plate by rules 200 lb
 Diameter of tubes 2 in Pitch of tubes 12 in Material of tube plates steel Thickness: Front 3/16 in Back 3/16 in Mean pitch of stays 12 in
 Pitch across wide end spaces 12 in Working pressures by rules 200 lb Girders to chamber tops: Material steel Depth and thickness of girder at centre 4 in Length as per rule 12 ft Distance apart 12 in Number and pitch of stays in each 1 12 in
 Working pressure by rules 200 lb Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked separately no
 Diameter 12 in Length 12 ft Thickness of shell plates 3/16 in Material steel Description of longitudinal joint butt Diam. of rivet holes 1/4 in Pitch of rivets 2 in Working pressure of shell by rules 200 lb Diameter of flue 12 in Material of flue plates steel Thickness 3/16 in
 If stiffened with rings no Distance between rings 12 in Working pressure by rules 200 lb End plates: Thickness 3/16 in How stayed no
 Working pressure of end plates 200 lb Area of safety valves to superheater no Are they fitted with easing gear no



VERTICAL DONKEY BOILER — Manufacturers of Steel

No. *722* Description *Vertical Donkey Boiler*
 Made at *Glasgow* By whom made *W.D. Donkey Boilers* When made *1915* Where fixed *22*
 Working pressure *150 lbs* tested by hydraulic pressure to *225 lbs* Date of test *22-25* No. of Certificate *4009* Fire grate area *22* Description of Safety *Donkey*
 Valves *2* No. of Safety Valves *2* Area of each *10* Pressure to which they are adjusted *150* Date of adjustment *22-25*
 If fitted with casing gear *No* If steam from main boilers connected to donkey boiler *No* Dia. of donkey boiler *22* Length *22*
 Material of shell plates *Steel* Thickness *1/2"* Range of tensile strength *45,000* Descrip. of riveting long seams *Hand*
 Dia. of rivet holes *1/4"* Whether punched or drilled *No* Pitch of rivets *2"* Lap of plating *1"* Per centage of strength of joint *85* Rivets *Steel*
 Working pressure of shell by rules *150* Thickness of shell crown plates *1/2"* Radius of do. *12"* No. of stays to do. *2* Dia. of stays *1/2"*
 Diameter of furnace Top *22"* Bottom *22"* Length of furnace *22"* Thickness of furnace plates *1/2"* Description of joint *Hand*
 Working pressure of furnace by rules *150* Thickness of furnace crown plates *1/2"* Radius of do. *12"* Stayed by *2*
 Diameter of uptake *22"* Thickness of uptake plates *1/2"* Thickness of water tubes *1/2"* Dates of survey *22-25*

SPARE GEAR. State the articles supplied:— *2 Top end & 2 Bottom end bolts and nuts, 2 1/2" air bearing bolts & nuts, 1 set of coupling bolts complete, 1 set of feed and bridge pump valves, a quantity of assorted bolts and nuts, Iron of various sizes*

The foregoing is a correct description,

Manufacturer.

WILLIAM BEARDMORE & CO., LIMITED.

W.S. Wilson

Dates of Survey while building: During progress of work in shops -- *1915 Feb. 22-25 Mar. 2-5 16-26 31-Apr. 16-20 27-30 May 5-17 19-26 Jun. 9-17 29 July 5-28*
 During erection on board vessel --- *Aug. 5-13-25*
 Total No. of visits *23*

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders *26-5-15* Slides *19-5-15* Covers *19-5-15* Pistons *29-6-15* Rods *26-3-15*

Connecting rods *29-6-15* Crank shaft *30-4-15* Thrust shaft *3-5-15* Tunnel shafts --- Screw shaft *5-3-15* Propeller *5-3-15*

Stern tube *27-4-15* Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft *Steel* Identification Mark on Do. *4009 W.D.M. 30416* Material of Thrust shaft *Steel* Identification Mark on Do. *4009 W.D.M. 3-5-15*

Material of Tunnel shafts --- Identification Marks on Do. --- Material of Screw shafts *Iron* Identification Marks on Do. *4009 W.D.M. 5-3-15*

Material of Steam Pipes --- Test pressure ---

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

The machinery has been built under special supervision and has been forwarded to Dundee to be fitted on board the vessel. The workmanship and materials are of good quality throughout.

SEE GLASGOW REPORT NO. 242.

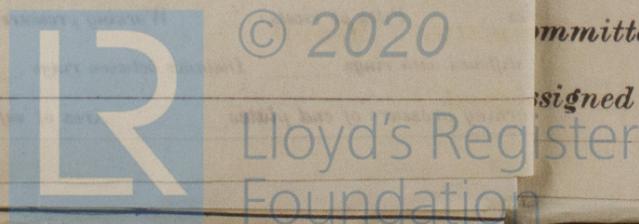
The amount of Entry Fee .. £ 1 : 0 : 0 When applied for,
 Special *18-16-0* £ 8 - 16 - 0
 Donkey Boiler Fee *4-8-0* £ 4 - 8 - 0
 Travelling Expenses (if any) £ : : 5th Nov. 1915

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

Committee's Minute **GLASGOW 7-SEP.1915**

FRI. DEC. 17. 1915

Assigned *Deferred for completion*



Glasgow

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

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