

## 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  
Reg. Book.

Glasgow

Date, First Survey

22/2/15

Last Survey

25-8-

1915

on the

S. S.

ALIDA

(Dundee Ship by Co. 78 &amp; 45)

(Number of Visits)

23

Gross

Tons

Net

When built

1915

Master

Built at

Dundee

By whom built

Dundee Shipbuilding Co. Ltd.

Engines made at

Coatbridge

By whom made

William Beardmore &amp; Co. Ltd. 78 &amp; 45

when made

1915

Boilers made at

Glasgow

By whom made

Dunsmuir &amp; Jackson 78 &amp; 45

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, &amp;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

Dia. of Screw shaft

as per rule

4.45"

Material of

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

Length of stern bush

2-9"

Dia. of Tunnel shaft

as per rule

None

Dia. of Crank shaft journals

as per rule

4.11"

Dia. of Crank pin

4 1/2"

Size of Crank webs

14 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 &amp; 2" Off

In Holds, &amp;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 &amp; size

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

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Valves &amp; Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

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

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

Dates of examination of completion of fitting of Sea Connections

of Stern Tube

Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

## BOILERS, &amp;c.—(Letter for record

8)

Manufacturers of Steel

James Colville, Dunlop &amp; 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

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

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers, or woodwork

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

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

plate

Working pressure of shell by rules

Size of manhole in end

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Construction of 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 stay

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 end 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

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

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Foundation



# 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 casing gear If steam from main boilers or from 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  
 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 bolts and nuts, 2 1/2 in bearing bolts & nuts, 1 set of coupling bolts complete, 1 set of feed and bilge 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. 30416

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 4009 W.D.M. 30416

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.

Glasgow

Certificate (if required) to be sent to

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for,

Special £ 8 : 16 : 0 .. £ 8 - 16 - 0 .. 19...

Donkey Boiler Fee £ 4 : 8 : 0 .. £ 4 - 8 - 0 .. 19...

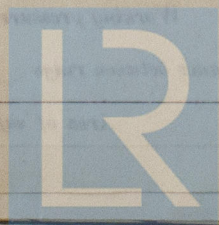
Travelling Expenses (if any) £ .. .. 5th Nov. 1915

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

Committee's Minute GLASGOW 7-SEP.1915

ERI DEC. 17. 1915

Assigned Deferred for completion



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