

REPORT ON MACHINERY.

No. 34184

Received at London Office WED. 17 OCT. 1917

Date of writing Report 5 October 1917 when handed in at Local Office

Port of Glasgow

No. in Survey held at Reg. Book.

Date, First Survey 25 July 1915

Last Survey 6 October 1917

on the Machinery of H. AIGBURTH

Master

Built at Paisley

By whom built J. Fullerton & Co (P242)

Tons

Gross

Net

When built 1917

Engines made at Glasgow

By whom made Ross & Duncan (P2995)

When made 1917

Boilers made at Glasgow

By whom made Ross & Duncan (P2995)

When made 1917

Registered Horse Power

Owners Alfred Rowland & Co

Port belonging to Liverpool

Nom. Horse Power as per Section 28 122

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 15" 25 1/2" 41" Length of Stroke 30"

Revs. per minute 102

Dia. of Screw shaft 8 1/2"

as per rule 8 1/2"

Material of screw shaft

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 one length 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

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 3'

Dia. of Tunnel shaft 7 1/2"

as per rule 7 1/2"

Dia. of Crank shaft journals 8 1/2"

as per rule 8 1/2"

Dia. of Crank pin 8 1/2"

Size of Crank webs 15 1/2" x 5 1/2"

Dia. of thrust shaft under collars 8 1/2"

Dia. of screw 10 1/2"

Pitch of Screw 12 1/2"

No. of Blades 4

State whether moveable no

No. of Feed pumps 2

Diameter of ditto 2 1/2"

Stroke 15"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 2 1/4"

Stroke 15"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 2

SIZES OF PUMPS

FEED 5 1/2" x 3 1/2" x 5"

DONKEY 6" x 8" x 8"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 - 2 1/4"

In Holds, &c. One each side 2"

No. of Bilge Injections 1

SIZES 3"

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

Yes 2 1/4"

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

Tapered 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

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 Suctions

How are they protected

Bored 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

12 March 17 of Stern Tube

12/3/17

Screw shaft and Propeller

12/3/17

Is the Screw Shaft Tunnel watertight

as tunnel

Is it fitted with a watertight door

worked from

David Colville & Son Motherwell

BOILERS, &c.—(Letter for record)

3

Manufacturers of Steel

David Colville & Son Motherwell

Total Heating Surface of Boilers 2157 1/2

Is Forced Draft fitted

no

No. and Description of Boilers

One Single ended

Working Pressure 180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test 15/5/17

No. of Certificate 13784

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

59 1/2

No. and Description of Safety Valves to each boiler

2 Direct Spring

Area of each valve 5 1/4

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

3 1/2"

Mean dia. of boilers 15 1/2"

Length 10 1/2"

Material of shell plates

Steel

Thickness 1 1/2"

Range of tensile strength 28/31 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

Lap D.R.

long. seams 2 D.S. T.R.

Diameter of rivet holes in long. seams 1 1/4"

Pitch of rivets 8 1/2"

Lap of plates or width of butt straps 18 1/2"

Per centages of strength of longitudinal joint

rivets 85 1/2

Working pressure of shell by rules

182 1/2

Size of manhole in shell

16 x 12

No. and Description of Furnaces in each boiler

3 Plain

Material Steel

Outside diameter 46 1/2

Size of compensating ring

7 1/2" x 1 1/2"

No. and Description of longitudinal joint

Keel

No. of strengthening rings

none

Length of plain part

top 6 1/2"

bottom 5 1/2"

Thickness of plates

crown 13/16"

Description of longitudinal joint

Keel

No. of strengthening rings

none

Working pressure of furnace by the rules

183 1/2

Combustion chamber plates: Material

Steel

Thickness: Sides 1 1/2"

Back 1 1/2"

Top 1 1/2"

Bottom 1 1/2"

Working pressure by rules

183 1/2

Pitch of stays to ditto: Sides

10 x 8 1/2"

Back 8 1/2 x 9 1/2"

Top 10 x 8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

186 1/2

End plates in steam space:

Steel

Material of stays

Steel

Diameter at smallest part 2 1/2"

Area supported by each stay

100 1/2

Working pressure by rules

186 1/2

Material of stays

Steel

Material

Steel

Thickness 1 1/2"

Pitch of stays 19 1/4 x 1 1/4"

How are stays secured

DOLE NUTS & LOOSE WASHERS

Working pressure by rules

180 1/2

Material of Front plates at bottom

Steel

Diameter at smallest part 6 1/2"

Area supported by each stay

350 1/2

Working pressure by rules

184

Material of Lower back plate

Steel

Thickness 2 1/2"

Greatest pitch of stays 14 x 8 1/2"

Working pressure of plate by rules

183 1/2

Diameter of tubes 3 1/2"

Pitch of tubes 4 1/4 x 4 1/2"

Material of tube plates

Steel

Thickness: Front 2 1/2"

Back 1 1/2"

Mean pitch of stays 11 1/2"

Pitch across wide water spaces 14"

Working pressures by rules

185 1/2

Girders to Chamber tops: Material

Steel

Thickness of girder at centre 8 1/2" x 1 1/2"

Length as per rule 23 1/2"

Distance apart 8 1/2"

Number and pitch of stays in each

2 - 10"

Working pressure by rules

186 1/2

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

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

Yes

Lloyd's Register

W 975-0053

Foundation

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes. 96 at 36109.

SPARE GEAR.

State the articles supplied:-

Two each of top & bottom end & main bearing bolts and a set of coupling bolts all fitted with nuts, feed & bilge pump valves, assorted bolt & nuts, iron of various sizes.

The foregoing is a correct description,

Ross Duncan

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1915 Jan. 25 Feb. 22 Mar. 4 12 29 Apr. 8 13 15 22 30 May 11 14 21 31 June 9 16 18 July 8 Aug. 12 14 Sept. 14 20 Oct. 12 26
During erection on board vessel - Nov. 16 1916 Jan. 26 Feb. 22 23 24 July 14 21 Dec. 5 11 20 28 1917 Jan. 9 31 Feb. 26 4 13 14 21 23 24 Mar. 5 7 12 14 20 27 Apr. 5 18 26
Total No. of visits May 10 15 July 24 Aug. 22 24 31 Sep. 20 29 Oct. 4 6 65

Is the approved plan of main boiler forwarded herewith?

Yes

" " " donkey " " "

Yes

Dates of Examination of principal parts - Cylinders 27-3-17. Slides 27-3-17. Covers 8-4-15. Pistons 5-4-17. Rods 5-4-17.

Connecting rods 5-4-17. Crank shaft 7-3-17. Thrust shaft 10-5-17. Tunnel shafts none. Screw shaft 27-2-17. Propeller 27-2-17.

Stern tube 27-2-17. Steam pipes tested 27-8-17. Engine and boiler seatings 12-3-17. Engines holding down bolts 29-9-17.

Completion of pumping arrangements 6-10-17. Boilers fixed 29-9-17. Engines tried under steam 6-10-17.

Main boiler safety valves adjusted 4-10-17. Thickness of adjusting washers 9/32 & 5/16.

Material of Crank shaft N. IRON Identification Mark on Do. G.S.A. Material of Thrust shaft N. IRON Identification Mark on Do. G.S.A.

Material of Tunnel shafts none Identification Marks on Do. Material of Screw shafts N. IRON Identification Marks on Do. G.S.A.

Material of Steam Pipes Solid drawn Copper. Test pressure 360 lbs.

Is an installation fitted for burning oil fuel no. Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case no. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under special survey; the materials & workmanship are good. It has been properly fitted on board and tried under steam and the case is eligible in my opinion for the notation + L.M.C. 10.17.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.17.

FWD 17/10/17

Blitchie

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for,

Special ... £ 18 : 6 : 0 16/10/17

Donkey Boiler Fee ... £ ... When received, 18/10/17

Travelling Expenses (if any) £ ... 19/10/17

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

Committee's Minute GLASGOW 16 OCT. 1917

Assigned + L.M.C. 10.17



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