

## REPORT ON MACHINERY.

No. 34080

Received at London Office

WED. 15 AUG. 1917

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 14<sup>th</sup> Feb'y.Last Survey 14<sup>th</sup> Augt. 1917.

(Number of Visits 39)

Tons { Gross  
Net.

Master

Built at Belfast

By whom built Harland &amp; Wolff Lim.

When built 1917

Engines made at Glasgow

By whom made Harland &amp; Wolff Lim.

when made 1917

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &amp;c.—Description of Engines Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 27" 44" 73" Length of Stroke 48" Revs. per minute

Dia. of Screw shaft as per rule 14 7/8" 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

in the propeller boss Yes If the liner is in more than one length are the joints burned continuous 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 66 1/2"

Dia. of Tunnel shaft as per rule 13 3/32" Dia. of Crank shaft journals as per rule 14 1/2" Dia. of Crank pin 14 1/2" Size of Crank webs 28" x 9" Dia. of thrust shaft under

collars 14 3/4" Dia. of screw 17-6" Pitch of Screw 16-6" No. of Blades 4 State whether moveable Yes Total surface 102.54

No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

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

In Engine Room In Holds, &amp;c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room &amp; size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible 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

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) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure 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 Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown 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

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

W764 - 00402



# 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 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  
 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:

The foregoing is a correct description,

FOR HARLAND & WOLFF, LTD.,

J. E. Beck

Manufacturer.

GENERAL MANAGER.

DIESEL ENGINE WORKS.

Dates of Survey while building During progress of work in shops - - - - -  
 During erection on board vessel - - - - -  
 Total No. of visits 39

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 16.5.17 Slides 16.5.17 Covers 5.5.17 Pistons 16.5.17 Rods 24.5.17

Connecting rods 24.5.17 Crank shaft 4.8.17 Thrust shaft 25.6.17 Tunnel shafts 25.6.17 Screw shaft 25.6.17 Propeller

Stern tube 22.8.17 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. 5241E Material of Thrust shaft Steel Identification Mark on Do. 638 REM

Material of Tunnel shafts Steel Identification Marks on Do. 1073A, 1073A1, 842, 295A, 295A1, 1069 Material of Screw shafts Steel Identification Marks on Do. 912, 13 REM

Material of Steam Pipes Test pressure

General Remarks (State quality of workmanship, opinions as to class, &c. The Engines have been built

under Special Survey, the materials and workmanship are good.

The Engines have been forwarded to Belfast where they will be fitted to Standard Vessel No 521 building by Messrs Harland & Wolff Ltd

Rpt. 9a.

Port of

Belfast

Continuation of Report No. 7864 dated 25<sup>th</sup> Sep 1917 on the

P.S. War Clover

List of Pumps

1 Ballast 10 1/2" x 14" x 24" ✓  
 1 General 9 1/2" x 7" x 18" ✓  
 1 Feed 9 1/2" x 7" x 18" ✓

List of Spare Gear

1 Propeller Cast Iron ✓  
 1 H.P. piston valve ✓  
 2 Top end bolts & nuts ✓  
 2 Bottom " " ✓  
 2 Main bearing " " ✓  
 3 Crank Shaft coupling bolts & nuts ✓  
 3 Tunnel " " ✓  
 1 Feed pump suction valve ✓  
 1 " discharge " ✓  
 1 Biffe " suction " ✓  
 1 " discharge " ✓  
 3 Main Feed Check valves ✓  
 3 Donkey " " ✓  
 24 Bolts & nuts assorted ✓  
 6 Cylinder cover studs & nuts ✓  
 6 Steam chest " " ✓  
 12 Junk ring " " ✓  
 5 Bars round iron ✓  
 3 " flat " ✓  
 Several plain boiler tubes  
 Spare firebars etc.

R. F. Pennington  
 25-9-17

Certificates (if required) to be sent to

The amount of Entry Fee .. £  
 Special .. £  
 Donkey Boiler Fee .. £  
 Travelling Expenses (if any) £

When applied for,

When received,

Jas Easthope

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

Committee's Minute GLASGOW.

4 AUG 1917

Assigned Deferred for completion

FRI 5 OCT 1917