

REPORT ON MACHINERY.

Received at London Office

FRI. JUN. -4. 1915

Date of writing Report 3 June 1915 When handed in at Local Office

Port of

No. in Survey held at
Reg. Book.

Dartmouth

Date, First Survey 24 Sept 1914

Last Survey 13 May

1915

on the

Steel Single Screw Lug "Dartmothian"

(Number of Visits

17

Gross

50.39

Net

1.93

When built

1915-15

Master J. Weeks

Built at

Dartmouth

By whom built

Philip & Son Ltd

Engines made at

Dartmouth

By whom made

Philip & Son Ltd

when made

1915

Boilers made at

Glasgow

By whom made

Muir & Findlay

when made

1915

Registered Horse Power

60

Owners

Renwick Wilton & Co

Port belonging to

Dartmouth

Nom. Horse Power as per Section 28

36

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Compound Surface Condensing

No. of Cylinders

No. of Cranks

Dia. of Cylinders

11 " 7 23 "

Length of Stroke

16 "

Revs. per minute

160

Dia. of Screw shaft

as per rule 5.19

Material of

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

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

If two

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

Length of stern bush

1'-9"

Dia. of Tunnel shaft

as per rule 4.77

Dia. of Crank shaft journals

as per rule 5

Dia. of Crank pin

5 "

Size of Crank webs

5 1/2 x 3 1/4

Dia. of thrust shaft under

collars

5 "

Dia. of screw

6 ft

Pitch of Screw

7 ft 6 ins

No. of Blades

4

State whether moveable

No

Total surface

19 ft

No. of Feed pumps

1

Diameter of ditto

1 3/4 "

Stroke

16 "

Can one be overhauled while the other is at work

No. of Bilge pumps

1

Diameter of ditto

1 3/4 "

Stroke

16 "

Can one be overhauled while the other is at work

No. of Donkey Engines

1

Sizes of Pumps

2 1/2 "

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

In Engine Room Two in No. 2 "

In Holds, &c. One 2 " dia in for Cabin & one

2 " in after compartment

No. of Bilge Injections

1 sizes 2 3/4 "

Connected to ~~main~~ or to circulating pump

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

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

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

None

How are they protected

Yes

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

23.2.15

of Stern Tube

23.2.15

Screw shaft and Propeller

2.3.15

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—(Letter for record

Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No

No. and Description of Boilers

158.

One Cylindrical Tubular

Working Pressure

150 lbs

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

2 in 1 Box Double Spring

Area of each valve

3.14

Pressure to which they are adjusted

150 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4 1/2 "

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 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

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 Top & 2 Bottom end connecting rod bolts & nuts
2 main bearing studs and nuts - 1 set of Coupling Bolts (5 in N^o) 1 set of
Feed pump Valves 1 set of Bilge pump valves - assorted bolts & nuts, Iron
of various sizes.

The foregoing is a correct description,

PHILIP & SON, LIMITED

Manufacturer.

G Nowell Philip

Dates of Survey while building
During progress of work in shops -- 1914 Sept 24 Oct 7 23 Nov 6 18 Dec 3 21 1915 Jan 5 18 27
During erection on board vessel --- 1915 Feb 23 Mar 2 11 25 April 13 30 May 13
Total No. of visits 17

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " " Nil

Dates of Examination of principal parts—Cylinders 7.10.14 Slides 3.12.14 Covers 7.10.14 Pistons 7.10.14 Rods 7.10.14
Connecting rods 7.10.14 Crank ~~and~~ Thrust shaft 7.10.14 Intermediate Tunnel shaft 7.10.14 Screw shaft 2.3.15 Propeller 2.3.15
Stern tube 23.2.15 Steam pipes tested 13.4.15 Engine and boiler seatings 23.2.15 Engines holding down bolts 11.3.15
Completion of pumping arrangements 30.4.15 Boilers fixed 13.4.15 Engines tried under steam 13.5.15
Main boiler safety valves adjusted 30.4.15 Thickness of adjusting washers Starbo 7/16" Port 1 1/32"
Material of Crank shaft Thrust Steel Identification Mark on Do. 384 Material of Thrust shaft Identification Mark on Do.
Material of Tunnel shaft Intermediate Steel Identification Marks on Do. 385 WHH Material of Screw shafts Steel Identification Marks on Do. 3853 H
Material of Steam Pipes Solid drawn Copper Test pressure 300 lbs Hydraulic

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under Special Survey in general conformity with the Rules and approved drawings.
The Boiler was made at Glasgow by Messrs Muir & Findlay vide Glasgow Report No 34860
The materials used in the Construction of the Main Engines are of good quality and to my satisfaction.
Main & Auxiliary Machinery were examined while working under steam at 150 lbs pressure and found to be satisfactory.
The Machinery & Boiler of this vessel are in my opinion good and efficient and eligible subject to the favourable consideration of the Committee to be classed with this Society and to receive the notation of LMC. 5-15 in the Register Book.

It is submitted that this vessel is eligible for

THE RECORD. + LMC 5. 15.

The amount of Entry Fee .. £ 1 : - :
Special .. £ 8 : - :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ 4 : 15 : 2

When applied for.

3 June 1915

When received.

10/6/15

Committee's Minute

FRI. DEC. 17. 1915

Assigned

+ L.M.C. 5-15

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



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MACHINERY CERTIFICATE
WRITTEN.

Philip & Son Ltd, Dartmouth.

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