

REPORT ON MACHINERY

No. 5724

Received at London Office

Date of writing Report 12 Aug 1917 When handed in at Local Office 10 Port of Plymouth

No. in Survey held at Dartmouth Date, First Survey 23 Aug 1916 Last Survey 30 March 1917
Reg. Book. Steel Twin Se Jug - H₅ 21 - (Number of Visits 14)

Master Built at Dartmouth By whom built Philip & Son Ltd Tons 1917-3
Engines made at Dartmouth By whom made Philip & Son Ltd when made 1917-3

Boilers made at Pollard & Sons By whom made Arr Dutchish when made 1917

Registered Horse Power _____ Owners War Office Port belonging to _____
Nom. Horse Power as per Section 28 _____ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines (Twin Screw) &c.

No. of Cylinders 4 No. of Cranks 4
Dia. of Cylinders 11 and 23 (2 each) Length of Stroke 16" Revs. per minute 180 Dia. of Screw shaft 5 1/4" Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight

the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes Length of stern bush 1'-9"

Dia. of Tumbol shaft 5" Dia. of Crank shaft journals 5" Dia. of Crank pin 5" Size of Crank webs 5 3/4" x 4" Dia. of thrust shaft under

rollers 5" Dia. of screw 5-9" Pitch of Screw 6'-6" No. of Blades 4 State whether moveable No Total surface 16 sq ft

No. of Feed pumps 2 Diameter of ditto 1 3/4" Stroke 16 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 1 3/4" Stroke 16 Can one be overhauled while the other is at work Yes

No. of Donkey Engines one Sizes of Pumps 5 1/2 x 4 1/2 x 6 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room One 2" In Holds, &c. One - Forehold, One in Eng Room

One in aft Hold, one in aft Peak all 3" Yes

No. of Bilge Injections 4 sizes 4 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size No

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

How are they protected _____

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

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. 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 _____

g. seams _____ Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____

Percentages of strength of longitudinal joint _____ Working pressure of shell by rules _____ Size of manhole in shell _____

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

Length of plain part _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____

Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____

Length of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____

Material of stays _____ Area 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 _____

Area 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 _____ Steam dome: description of joint to shell _____ % of strength of joint _____

Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____

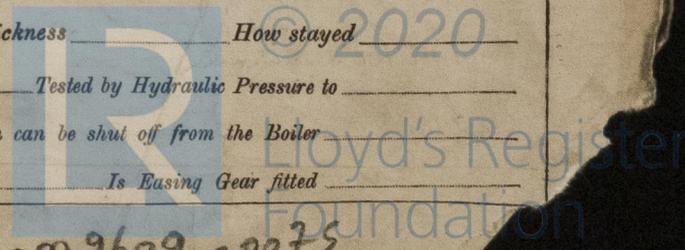
Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

SUPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____

Site of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____

Number of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

009601 - 009609 - 0075



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 1 Propeller - 1 Steam tube brush apcr, 1 For neck ring - 1 Set piston springs for HP & LP Cyls, 1 pair bearings of each kind for Main Engines, 1 set bolts for one coupling, 2 Connecting Rod bolts for Top & 2 for bot end, 2 main bearing bolts, 1 Valve spindle, 2 set valves air pump 1 set feed pump 1 set bilge pump, 1 set feed check valves only, 1 Spring for each fixed for escape valves, 12 Tubes & 24 ferrules for Condenser - 6 Tubes (Boiler) - 6 Boiler Tube Stoppers, 1 complete set firebars for 2 furnaces, 1 set safety Valve Springs - 2 Kluge Gauge flares, joints & 1 day ordinary flares, Spanners in tack 1 complete set for engine 1 in for propeller - 1 40 gall oil tank with tap & filling plug - 1 Oil drum 15 Gall with tap, 1 Oil drum 5 Gall - 1 1/2 Gall measure - 6 man mud hole boiler door joints - water valves piston rings for donkey 1 set - for air feed pump 1 set complete - 1 Boiler Tube expander - 3 ash brackets, 1 Valve spindle for air 1 set Piston Ring for circulating Eng -

The foregoing is a correct description,

For PHILIP & SON, LIMITED.

Genoel Philip

Manufacturer.

MANAGING DIRECTOR.

Dates of Survey while building { During progress of work in shops -- 1916 Aug 23 Sep 19 23 Oct 31 Nov 17 Dec 5 20 -- 1917 Jan 22 31 Feb 14
 { During erection on board vessel -- 1917 Feb 28 Mar 16 21 30
 Total No. of visits 14

Is the approved plan of main boiler forwarded herewith ~~Yes~~ No

Dates of Examination of principal parts— Cylinders 31.10.16 Slides 31.10.16 Covers 31.10.16 Pistons 31.10.16 Rods 31.10.16
 Connecting rods 31.10.16 Crank shaft 5.12.16 Thrust shaft 28² Tunnel shafts 28² Screw shaft 21.1.17 Propeller 28² 21³
 Stern tube 21.1.17 Steam pipes tested 21.3.17 Engine and boiler seatings 20.12.16 Engines holding down bolts 28.2.17
 Completion of pumping arrangements 21.3.17 Boilers fixed 16.3.17 Engines tried under steam 12 April 1917
 Completion of fitting sea connections 14.2.17 Stern tube 20¹² Screw shaft and propeller 21 May 17
 Main boiler safety valves adjusted 12.4.17 Thickness of adjusting washers ✓

Material of Crank shaft Steel Identification Mark on Do. Material of Thrust shaft Steel Identification Mark on Do.
 Material of ~~Intermediate~~ shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.
 Material of Steam Pipes Solid drawn copper Test pressure 280 lbs per sq in
 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 vessel has been supervised by me during construction at the works of Messrs Philip & Son Ltd of Dartmouth in accordance with instructions contained in the Secretary's letter dated 30 June 1916

As this vessel is not intended for classification, it is submitted further action is unnecessary.

JWD 15/9/17

Jacob Laro
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £ 20	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £ 7:8:11	:	:	4/10/17 19 16

Committee's Minute

Assigned

See hon rpt No 91184

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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