

REPORT ON MACHINERY.

Port of Southampton

Received at London Office

THUR. 10 JAN 1907

No. in Survey held at Southampton

Date, first Survey March 22nd

Last Survey 7th Jan 1907.

Reg. Book.

on the Screw Lug S/S No 138.

(Number of Visits 44)

Master Built at Southampton By whom built Mp Day Summers & Co L^{td} Tons { Gross 85.8
Net 1.73

Engines made at Southampton By whom made Mp Day Summers & Co L^{td} when made 1907-1.

Boilers made at do By whom made do when made 1907-1.

Registered Horse Power 50. Owners not yet sold, built in spec Port belonging to not registered

Nom. Horse Power as per Section 28 50. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Inverted Compound Surface Condensing No. of Cylinders Two. No. of Cranks Two

Dia. of Cylinders 15" 9 30" Length of Stroke 24" Revs. per minute 130. Dia. of Screw shaft as per rule 6.98. Material of screw shaft iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners Is the after end of the liner made water tight in the propeller boss If the liner is in more than one length are the joints burned 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

Dia. of Tunnel shaft as per rule 6.21 Dia. of Crank shaft journals as per rule 6.52 Length of stern bush 2.5" White metal

Dia. of Crank pin 6 5/8" Size of Crank webs 4 1/2 x 9 1/2" Dia. of thrust shaft under collars 6 5/8" Dia. of screw 7.4 Pitch of Screw 9.3" No. of Blades 4 State whether moveable fixed Total surface 20 1/2 sq ft

No. of Feed pumps one Diameter of ditto 2 1/4" Stroke 12" Can one be overhauled while the other is at work

No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work

No. of Donkey Engines one Sizes of Pumps 3 1/4", 4 1/2", 4" duplex No. and size of Suctions connected to both Bilge and Donkey pumps two 2" Suctions.

In Engine Room two 2" Suctions. In Holds, &c. one 2" Suction in each hold.

No. of Bilge Injections one size 3" Connected to condenser, or to circulating pump air 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 none.

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

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 Sep 6th of Stern Tube Sept 6 Screw shaft and Propeller Sept 6th

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Plates, Stewart & Lythgoe, Bar, Consett Iron Co.

Total Heating Surface of Boilers 951 sq ft Is Forced Draft fitted no. No. and Description of Boilers one cylindrical Multitubular.

Working Pressure 120 lbs Tested by hydraulic pressure to 240 lbs Date of test Sept 18. No. of Certificate 257.

Can each boiler be worked separately Area of fire grate in each boiler 38 sq ft No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 5.939" Pressure to which they are adjusted 125 lbs. Are they fitted with easing gear yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 8" Mean dia. of boilers 10.6" Length 9.0" Material of shell plates Steel.

Thickness 11/16" Range of tensile strength 29 1/2 to 32 lbs Are the shell plates welded or flanged Descrip. of riveting: cir. seams D.R. lap.

long. seams D.R. butt strap Diameter of rivet holes in long. seams 1" Pitch of rivets 4" Lap of plates or width of butt straps 10"

Per centages of strength of longitudinal joint rivets 84.9% Working pressure of shell by rules 120 1/2 lbs Size of manhole in shell 12 x 16"

Size of compensating ring 11/16" 11.1 lbs No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3.2 1/4"

Length of plain part top 6.3" crown 3/32" Description of longitudinal joint double butt straps No. of strengthening rings

bottom 6.8" thickness of plates bottom 3/32" Working pressure of furnace by the rules 120 lbs Combustion chamber plates: Material Steel Thickness: Sides 17/32" Back 7/16" Top 19/32" Bottom 17/32"

Pitch of stays to ditto: Sides 8 3/4 x 8 Back 9 1/2 x 9 1/2 Top 8 x 11 1/4 If stays are fitted with nuts or riveted heads nuts. Working pressure by rules 121 lbs.

Material of stays Steel. Diameter at smallest part 1.448 Area supported by each stay 90.25 Working pressure by rules 128 lbs End plates in steam space:

Material Steel Thickness 13/16" Pitch of stays 15 1/2 x 16 1/4 How are stays secured Nuts & Washers Working pressure by rules 124 lbs Material of stays Steel.

Diameter at smallest part 3.03 Area supported by each stay 251.875 Working pressure by rules 120 lbs Material of Front plates at bottom Steel

Thickness 2 13/16" Material of Lower back plate Steel Thickness 3/32" Greatest pitch of stays butting Working pressure of plate by rules 120 lbs

Diameter of tube 3 1/2" Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 13/16" Back 3/4" Mean pitch of stays 13 1/2"

Pitch across wide water spaces 13" Working pressures by rules 120 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5 3/4 x 1 1/2 Length as per rule 1-11 1/2 Distance apart 11 1/4" Number and pitch of stays in each Two 8 x 11 1/4

Working pressure by rules 129 lbs 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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1100-818-0040

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____
 Working pressure tested by hydraulic pressure to _____ Date of test _____ When made _____ Where fixed _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Date of adjustment _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Dia. of donkey boiler _____ Length _____
 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 _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied: *Two crosshead bolts, 2 connecting rod bottom end bolts, 2 Main bearing bolts, six coupling bolts, 1 set of feed and 1 set of bilge pump valves. A quantity of assorted bolts and nuts and iron of various sizes.*

The foregoing is a correct description,
 Manufacturer. _____

For DAY, SUMMERS & Co., Ltd.
James L. Day
 Director

Dates of Survey while building
 During progress of work in shops - *March 22-26 April 25-11-17-19-21-23-30 May 11-16-17-21-22-26 June 6-13-18-27*
 During erection on board vessel - *Sept 8-13-15-18-19-21-26 Oct 9-19-24 Nov 2- Dec 7- Jan 7-1907*
 Total No. of visits *144.*

Is the approved plan of main boiler forwarded herewith *yes.*

Dates of Examination of principal parts—Cylinders *May 26-June 6* Slides *Aug 18-23* Covers *July 5-13-18* Pistons *April 17-19* Rods *April 21-24*
 Connecting rods *April 21* Crank shaft *April 22-26* Thrust shaft *July 3-5* Tunnel shafts *July 21-22* Screw shaft *July 5-13* Propeller *Aug 31*
 Stern tube *Aug 30* Steam pipes tested *Oct 3* Engine and boiler seatings *Sept 8-13-15* Engines holding down bolts *Sept 21*
 Completion of pumping arrangements *Oct 19* Boilers fixed *Sept 21-26* Engines tried under steam *Oct 30*
 Main boiler safety valves adjusted *Oct 30* Thickness of adjusting washers *3/16 each.*
 Material of Crank shaft *iron* Identification Mark on Do. *J.D.R-06* Material of Thrust shaft *iron* Identification Mark on Do. *J.D.R-06*
 Material of Tunnel shafts *iron* Identification Marks on Do. *J.D.R-06* Material of Screw shafts *iron* Identification Marks on Do. *J.D.R-06*
 Material of Steam Pipes *Copper.* Test pressure *240 lbs per sq inch.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The Engines and Boilers of this Vessel have now been built under Special Survey and in accordance with the approved plans & Secretaries Letters 11/5/06, 15/5/06, 17/3/06. The Materials and workmanship are of a good quality and when tried under steam was found satisfactory in every respect, and is now in my opinion eligible for the Notification **L.M.C. 1-07** recorded in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD L.M.C. 1-07.

Wm. D. Dikes
 10.1.07

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

The amount of Entry Fee. £ 1 : 0 :
 Special £ 8 : 0 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for *10.1.07*
 When received, *Dec 22 1906*

Committee's Minute *FRI. JAN 18 1907*
 Assigned *L.M.C. 1-07*



Certificate (if required) to be sent to the Secretary of the Committee's Minutes.