

## REPORT ON MACHINERY. No. 79596

Received at London Office

23 SEP 1919

Port of

Liverpool

1919

Date of writing Report

When handed in at Local Office

Date, First Survey

Last Survey

Sep 16 1919.

(Number of Visits)

3767

Tons Gross 3772.

Net 3772.

When built 1919

No. in Survey held at Birkenhead

Reg. Book.

292890 on the s/s "Dionysios Stathatos" ex "War Cadet"

Master Built at Birkenhead By whom built Cammell Laird &amp; Co. Ltd.

Engines made at Birkenhead By whom made Cammell Laird &amp; Co. Ltd.

Boilers made at Birkenhead By whom made Cammell Laird &amp; Co. Ltd.

Registered Horse Power Owners

Nom. Horse Power as per Section 28 518 517 Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &amp;c.—Description of Engines Triple Expansion Reciprocating No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27", 44", 73" Length of Stroke 48" Revs. per minute 82/90 Dia. of Screw shaft as per rule 14 3/4" 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 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 fitting for whole length two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5' 0 1/2"

Dia. of Tunnel shaft as per rule 13 3/8" Dia. of Crank shaft journals as per rule 14" Dia. of Crank pin 14 1/2" Size of Crank webs 52 x 28" Dia. of thrust shaft under

collars 14 1/2" Dia. of screw 17 1/2" Pitch of Screw 16 1/2" No. of Blades 4 State whether moveable No Total surface 98.2 sq. ft.

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 2 Sizes of Pumps 10 1/2" x 24" x 14" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Rooms 5-3/4" dia. In Holds, &amp;c. No. 1 Hold 2-3/2", No. 2 Hold 2-3/2", Reserve Bunker 2-3/2",

Deep Tank 2-3/2", No. 3 Hold 3-3/2" Yes

No. of Bilge Injections one sizes 8" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room of size Yes 3 1/2"

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 Valves and Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold 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

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

OILERS, &amp;c.—(Letter for record S) Manufacturers of Steel John Spencer &amp; Sons, Ltd., The Earl of Shrewsbury's Round Oak Works,

Total Heating Surface of Boilers 7668 sq. ft. Forced Draft fitted Yes No. and Description of Boilers 3 Single Ended Cylindrical Multitubular.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 1919/10/15 Nos. of Certificates 2037A 2037B

Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 sq. ft. No. and Description of Safety Valves to

each boiler 2. Spring loaded Area of each valve 9 1/2 sq. in. Pressure to which they are adjusted 185 lbs per sq. in. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9' 0" Mean dia. of boiler 15' 6" Length 11' 6" Material of shell plates Steel

Thickness 1/2" Range of tensile strength 29,32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR. Lap.

long. seams DR. Butt straps Diameter of rivet holes in long. seams 1 5/8" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 88.3 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"

Size of compensating ring fitted No. and Description of Furnaces in each boiler 3 Corrugated Witherite Material Steel Outside diameter 4' 2 1/2"

Length of plain part top Thickness of plates crown 3 19/32" Description of longitudinal joint Weld No. of strengthening rings

bottom Thickness of plates bottom 3 19/32" Working pressure by rules 216 lbs End plates in steam space:

Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 1/2" Back 1 1/2" Top 2 1/2" Bottom 2 1/2"

Pitch of stays to ditto: Sides 10 5/8" x 9 1/2" Back 10 5/8" x 8 1/2" Top 10 5/8" x 9 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180.5 lbs

Material of stays Steel Area at smallest part 2.36 sq. in. Area supported by each stay 98.28 sq. in. Working pressure by rules 216 lbs

Material of stays Steel Thickness 1/32" Pitch of stays 2 1/2" x 20 1/2" How are stays secured Weld Working pressure by rules 181 lbs Material of stays Steel

Area at smallest part 2.29 sq. in. Area supported by each stay 44.5 sq. in. Working pressure by rules 193 lbs Material of Front plates at bottom Steel

Thickness 3/32" Material of Lower back plate Steel Thickness 2 1/2" Greatest pitch of stays 13 5/8" x 8 1/2" Working pressure of plate by rules 187 lbs

Diameter of tubes 2 3/4" Pitch of tubes 4" x 3 1/2" Material of tube plates Steel Thickness: Front 3 1/2" Back 2 1/4" Mean pitch of stays 9 1/2"

Pitch across wide water spaces 13 5/8" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 2. 10" x 2 1/2" Length as per rule 35.56 ins. Distance apart 10 5/8" Number and pitch of stays in each 3-9 1/4"

Working pressure by rules 187 lbs 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

PERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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

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

W383-0171

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IS A DONKEY BOILER FITTED?

No ✓

If so, is a report now forwarded?

Rpt. 13.

SPARE GEAR. State the articles supplied:

2 Connecting Rod top and bottom and bolts and nuts. 2 Main Bearing bolts and nuts  
3 Crank Shaft and 3 Tunnel Shaft coupling bolts and nuts. 1 Feed Pump suction and  
1 discharge valve. 1 Bilge Pump suction and 1 discharge valve. 3 Main and 3 Donkey  
feed check valves. 50 Bolts and Nuts assorted. 6 Cylinder Cover, 6 Steam Chest covers  
and 12 Junk Ring studs and nuts. One Spare Propeller (Solid cast iron). Iron of  
various sizes. Also see additional list attached.

The foregoing is a correct description.

CAMMELL LAIRD AND COMPANY LIMITED.

J. W. Laird

Manufacturer.

LOCK SECRETARY,

Dates of Survey while building During progress of work in shops - Tun 5, 10, 21, 26, To 74 9, 15, 22, 26, Aug 1, 14, 15, 20, 22, 27, 29, Sept 2, 3, 5, 10, 11, 13, 17, 20, 27, 30, Oct 1, 3, 7, 9, 11, 15, 18, 21, 22, 25, 30, 31, Nov 5, 6, 8, 15, 18, 20, 24, 22, 25, 29, Dec 3, 4, 5, 13, 16, 19, 20, 23, Jan 2, 7, 9, 13, 24, 27, Feb 6, 12, 15, 18, 21, 24, 27, Mar 6, 11, 14, 17, Apr 3, 15, 18, May 1, 2, 3, 16, 18, 21, 22, 26, 28, 29, June 11, 16, 24, July 3, 15, 26, 29, Aug. 1, 13, 15, 19, Total No. of visits 28 Sept 3, 8, 9, 10, 11, 15, 16 108 visits.

Is the approved plan of main boiler forwarded herewith *Yes - Copy*  
*The approved plan is on board*

*donkey*, " "

Dates of Examination of principal parts—Cylinders 8/7/19 to 15/7/19 Slides 8/7/19 to 15/7/19 Covers 8/9/19 to 2/10/19 Pistons 8/9/19 to 13/10/19 Rods 8/9/19 to 15/10/19  
Connecting rods 8/9/19 to 13/10/19 Crank shaft 11/9/19 to 21/10/19 Thrust shaft 9/10/19 to 29/10/19 Tunnel shafts 9/10/19 to 29/10/19 Screw shaft 27/10/19 to 3/11/19 Propeller 15/7/19 to 15/10/19  
Stern tube 26/5/19, 29/5/19 Steam pipes tested 23/7/19 Engine and boiler seatings 9/7/19 Engines holding down bolts 1/9/19 to 9/9/19  
Completion of pumping arrangements 9/9/19 Boilers fixed 1/9/19 Engines tried under steam 10/9/19  
Completion of fitting sea connections 15/7/19 Stern tube 4/6/19 Screw shaft and propeller 1/6/19, 15/9/19  
Main boiler safety valves adjusted 3/9/19 Thickness of adjusting washers 6/9/19 to 11/9/19 Pro Boiler - P. 546 S. 136  
Material of Crank shaft Steel Identification Mark on Do. 6738, 6739, 6740 Material of Thrust shaft Steel Identification Mark on Do. 7268  
Material of Tunnel shafts Steel Identification Marks on Do. 7141, 7142, 7143 Material of Screw shafts Steel Identification Marks on Do. 7246  
Material of Steam Pipes wrought iron Test pressure 540 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 *Colombia*

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

The Materials and Workmanship are of good quality  
The Machinery has been built under Special Survey and in accordance with  
the approved plans and specification. When tried under full working  
conditions at sea same was found satisfactory in every respect and,  
in our opinion, is eligible to have record of *+LMC 9.19.*

It is submitted that  
this vessel is eligible for  
*THE RECORD + LMC 9.19. F.D.*

*J.W.D.*  
25/9/19

*B. G. Bedford & John D. Keel*  
Engineer Surveyor to Lloyd's Register of Shipping.

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

The amount of Entry Fee £ 146 : 14 :  
Special £ : :  
Donkey Boiler Fee £ : :  
Travelling Expenses (if any) £ : :

When applied for, 18 SEP 1919

When received, 17.10.19

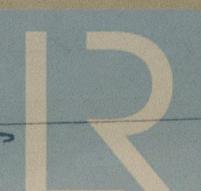
Committee's Minute LIVERPOOL 23 SEP 1919

Assigned

L. M. 6. 9. 19

F.D. *when fair is paid*

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