

# REPORT ON MACHINERY.

No. 20130

Received at London Office TUE. 24 MAY. 1921

Date of writing Report 23rd May 1921 When handed in at Local Office 23 May 1921 Port of Newport, Mon.  
 No. in Survey held at Newport, Mon. Date, First Survey Mar. 24 Last Survey May 20 1921  
 Reg. Book. 9503 on the S/S "Hesperia" ex "Patria" (Number of Visits 13)  
 Master Do Built at Flensburg By whom built Flensburg Schifffab. Ges. When built 1919  
 Engines made at Flensburg By whom made Flensburg Schifffab. Ges. when made 1919  
 Boilers made at Do By whom made Do when made 1919  
 Registered Horse Power 399 Owners H. P. Houston & Co. Port belonging to London  
 Nom. Horse Power as per Section 28 530 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Inverted Triple Expansion No. of Cylinders 3 No. of Cranks 3  
28 3/4 - 46 1/2 - 76 " Dia. of Cylinders 14 1/2 - 17 1/2 - 25 1/2 " Length of Stroke 48 " Revs. per minute 80 Dia. of Screw shaft 15 1/2 " Material of screw shaft 15 1/2 " 15.8" with new propeller  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner. Cedar all round 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 5' 4 7/8 "  
 Dia. of Tunnel shaft 13.9 " as per rule 14 " Dia. of Crank shaft journals 14 1/2 " as per rule 14 1/2 " Dia. of Crank pin 15 1/2 " Size of Crank webs 27 1/2 x 9 1/2 " Dia. of thrust shaft under  
 collars 14 1/2 " Dia. of screw 1 1/2 " Pitch of Screw 15 1/2 " No. of Blades 4 State whether moveable Yes Total surface 77 sq ft. 98  
 No. of Feed pumps 2 Diameter of ditto 10 1/2 " Stroke 2 1/2 " Can one be overhauled while the other is at work Yes See Lis 82426 Rpt  
 No. of Bilge pumps 2 Diameter of ditto 4 1/4 " Stroke 2 1/2 " Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 3 Sizes of Pumps Ballast 5.10" W 1/4" X 1 stroke No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 4 See Npt Letter 27.5.21 circulating 5' x 6" stroke Impeller 36" dia. In Holds, &c. N° 1 - 2, 4". N° 2 - 2, 4". N° 3 - 2, 4".  
N° 4 - 2, 4" aft. Pent 1 - 4".  
 No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 4"  
 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 below  
 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 N° 1 & 2 Hold Bilges How are they protected Wood casing  
 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 E. R. top platform

OILERS, &c.—(Letter for record 5) Manufacturers of Steel

Total Heating Surface of Boilers 7537 Is Forced Draft fitted Yes No. and Description of Boilers

Working Pressure 1185 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 \_\_\_\_\_ 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 \_\_\_\_\_ 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 \_\_\_\_\_

Pitch 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 \_\_\_\_\_

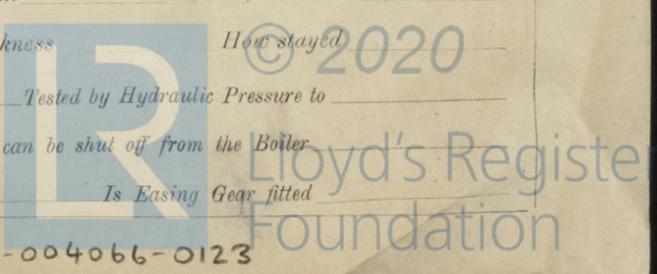
Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_

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 \_\_\_\_\_

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 \_\_\_\_\_



IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two pairs brasshead bearings & 4 bolts & nuts  
One pair crank pin bearings & 2 bolts & nuts, 2 main bearing bolts & nuts  
12 Coupling bolts & nuts, 1 set of Piston rings for H.P. I.P. & L.P.  
1 set of air, Feed & Bilge Pump Valves, 1 slide Valve spindle  
1 air Pump rod. 35 Condenser tubes & 50 pencils. A quantity of  
assorted Bolts & Nuts & Span of various sizes.

The foregoing is a correct description,

Manufacturer.

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

Is the approved plan of main boiler forwarded herewith ✓  
" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 1.4.21 Slides 1.4.21 Covers 1.4.21 Pistons 1.4.21 Rods 1.4.21  
Connecting rods 1.4.21 Crank shaft 14.4.21 Thrust shaft 14.4.21 Tunnel shafts 14.4.21 Screw shaft 30.3.21 Propeller 30.3.21  
Stern tube 30.3.21 Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts 14.4.21  
Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam 20.5.21  
Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓  
Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓  
Material of Crank shaft S. Identification Mark on Do. ✓ Material of Thrust shaft S. Identification Mark on Do. ✓  
Material of Tunnel shafts S. Identification Marks on Do. ✓ Material of Screw shafts S. Identification Marks on Do. ✓  
Material of Steam Pipes ✓ Test pressure ✓  
Is an installation fitted for burning oil fuel ✓ 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 ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been opened out, examined & found in good condition. The materials appear sound & the workmanship good. Show particulars taken from the machinery. In our opinion the machinery of this vessel is eligible for use as per M.S. 5.21 & T.S. 5.21. when two new Feed Pumps have been fitted. (Owners Rep. states new Feed Pumps will be fitted at Liverpool to which port the vessel is proceeding direct). The Boiler Survey is to be held at Liverpool & Surveyors at that port are being advised.

The amount of Entry Fee ... £ ? :  
Special ... £ :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :  
When applied for, 19...  
When received, 19...

J. M. Gibson.  
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 29 SEP. 1922

TUE. 24 APR. 1923

Committee's Minute

Assigned

See minute on Lw 8 24 26



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Lloyd's Register Foundation

Date of writing

No. in Reg. Book. 79513 on

Gross Tonnage Net

Registered Horse Power

No. of Donkey Boilers in Main Boilers

Last Report

Particulars

Periodical Surveys cause of Repairs, account of Damages besides being detected and initials

Damage cases

declined

Did the Surveyor permit

Do.

Was this work done

and what parts of

also what special

Surveyor to assure

Did the Surveyor examine

Did the Surveyor examine

Did the Surveyor examine

Did the Surveyor examine

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Committee

Assigned