

4376

Rpt. 4b

# REPORT ON OIL ENGINE MACHINERY.

No. 21201

Date of writing Report MAY 5<sup>th</sup> 1922 When handed in at Local Office May 5<sup>th</sup> 1922 Port of New York N.Y. Received at London Office May MON. 29 1922

No. in Survey held at New York N.Y. Date, First Survey 12 Nov 1920 Last Survey 15 Nov 1921  
Reg. Book. Number of Visits 41 MAY 4 1922

on the Single Twin Triple Screw vessels: **"CALIFORNIAN"**

Tons { Gross 7899.  
Net 4915.

Master WM. LYONS. Built at CHESTER, PA. By whom built MERCHANT S.B. CORP. Yard No. 385 When built 1922.

Engines made at NEW YORK N.Y. By whom made DE LA VERGNE MACHINE WORKS Engine No.          When made 1922

Donkey Boiler made at PHILADELPHIA By whom made THE W.M. CRAMP & SONS S.B. CO. Boiler No. 496 When made 1922.

Brake Horse Power          Owners AMERICAN HAWAIIAN S.S. CO. Port belonging to NEW YORK.

Nom. Horse Power as per Rule          Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted YES.

OIL ENGINES, &c.—Type of Engines 4 AUX. DIESEL NON REVERSIBLE 2 or 4 stroke cycle H Single or double acting SINGLE

Maximum pressure in cylinders 500 LBS. No. of cylinders 2 No. of cranks 2 Diameter of cylinders 325<sup>mm</sup>

Length of stroke 350<sup>mm</sup> Revolutions per minute 300. Means of ignition COMPRESSION Kind of fuel used FUEL OIL.

Is there a bearing between each crank YES. Span of bearings (Page 92, Section 2, par. 7 of Rules) 368<sup>mm</sup>

Distance between centres of main bearings 600<sup>mm</sup> Is a flywheel fitted YES. Diameter of crank shaft journals as per Rule 168<sup>mm</sup> as fitted 170<sup>mm</sup>

Diameter of crank pins 190<sup>mm</sup> Breadth of crank webs as per Rule 380<sup>mm</sup> as fitted          Thickness of ditto as per Rule 92<sup>mm</sup> as fitted         

Diameter of flywheel shaft as per Rule 168<sup>mm</sup> as fitted 170<sup>mm</sup> Diameter of tunnel shaft as per Rule          as fitted          Diameter of thrust shaft as per Rule          as fitted         

Diameter of screw shaft as per Rule          as fitted          Is the screw shaft fitted with a continuous liner the whole length of the stern tube         

Is the after end of the liner made watertight 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          If without liners, is the shaft arranged to run in oil         

Type of outer gland fitted to stern tube          Length of stern bush          Diameter of propeller         

Pitch of propeller          No. of blades          state whether moveable          Total surface          square feet

Method of reversing          Is a governor or other arrangement fitted to prevent racing of the engine          when decoupled          Thickness of cylinder liners         

Are the cylinders fitted with safety valves YES Means of lubrication FORCED Are the exhaust pipes and silencers water cooled or lagged with non-conducting material YES If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine         

No. of cooling water pumps          Is the sea suction provided with an efficient strainer which can be cleared within the vessel         

No. of bilge pumps fitted to the main engines          Diameter of ditto          Stroke         

Can one be overhauled while the other is at work          No. of auxiliary pumps connected to the main bilge lines          How driven         

Sizes of pumps          No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room         

and in holds, etc.          No. of ballast pumps          How driven          Sizes of pumps         

Is the ballast pump fitted with a direct suction from the engine room bilges          State size          Is a separate auxiliary pump suction fitted in         

Engine Room and size          Are all the bilge suction pipes fitted with roses          Are the roses in Engine Room always accessible         

Are the sluices on Engine Room bulkheads always accessible          Are all connections with the sea direct on the skin of the ship         

Are they valves or cocks          Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates         

Are the discharge pipes above or below the deep water line          Are they each fitted with a discharge valve always accessible on the plating of the vessel         

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times          Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges          Is the screw shaft tunnel watertight          Is it fitted with a watertight door         

worked from          If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork         

No. of main air compressors          No. of stages          Diameters          Stroke          Driven by         

No. of auxiliary air compressors          No. of stages          Diameters          Stroke          Driven by         

No. of small auxiliary air compressors          No. of stages          Diameters          Stroke          Driven by         

No. of scavenging air pumps          Diameter          Stroke          Driven by         

Diameter of auxiliary Diesel Engine crank shafts as per Rule          as fitted          Are the air compressors and their coolers made so as to be easy of access         

AIR RECEIVERS:—No. of high pressure air receivers          Internal diameter          Cubic capacity of each         

material          Seamless, lap welded or riveted longitudinal joint          Range of tensile strength         

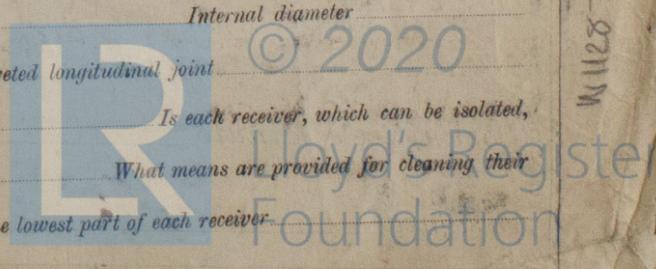
thickness          working pressure by Rules          No. of starting air receivers          Internal diameter         

Total cubic capacity          Material          Seamless, lap welded or riveted longitudinal joint          Is each receiver, which can be isolated,         

Range of tensile strength          thickness          Working pressure by rules          What means are provided for cleaning their         

fitted with a safety valve as per Rule          Can the internal surfaces of the receivers be examined          Foundation         

inner surfaces          Is there a drain arrangement fitted at the lowest part of each receiver         



6100-0019

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....	22.6.21	15	143	C. J. H.	
"    "    COVERS .....	22.6.21	"	143	C. J. H.	
"    "    JACKETS .....	✓	✓	✓	✓	
"    "    PISTON WATER PASSAGES .....	✓	✓	✓	✓	
MAIN COMPRESSORS—1st STAGE .....	24.10.21	45	TESTED UNDER		
"    "    2nd .....	24.10.21	1000	WORK <sup>g</sup> COND <sup>s</sup>		
"    "    3rd .....					
AIR RECEIVERS—STARTING .....					
"    "    INJECTION .....					
AIR PIPES .....	15.11.21	✓	"	G. T.	
FUEL PIPES .....	15.11.21	✓	"	G. T.	
FUEL PUMPS .....	15.11.21	✓	"	G. T.	
SILENCER .....					
"    "    WATER JACKET .....					
SEPARATE FUEL TANKS .....					

PLANS. Are approved plans forwarded herewith for shafting  (If not, state date of approval.)

Receivers

Separate Tanks

SPARE GEAR SEE REPORT ON MAIN ENGINES.

The foregoing is a correct description,

*De la Vergne Machine Co.*  
CITIZEN

Manufacturer.

Dates of Survey while building  
 During progress of work in shops: 1920: Nov 12, 26 Dec 17, 30 1921 Jan 10, 13, 24 Feb 17 Mar 4, 29 Apr 15, 18, 22, 29 May 16, 26 Oct 24 Nov 15  
 During erection on board vessel: 1920: NOV. 30, DEC. 5, 15, 22, 1921: JAN. 4, 13, 17, 19, 24, 27, 31, FEB. 27, 19, 21, MAR. 6, 17  
 APR. 6, 13, 28, MAY 1, 2, 4.  
 Total No. of visits 41.

Dates of Examination of principal parts—Cylinders 16.5.21 Covers 16.5.21 Pistons 26.5.21 Rods ✓ Connecting rods 15.4.21  
 Crank shaft 22.6.21 Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine seatings ✓  
 Engines holding down bolts ✓ Completion of pumping arrangements ✓ Engines tried under working conditions 15.12.21  
 Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓  
 Material of crank shaft STEEL Identification Mark on Do. G.T. Material of thrust shaft ✓ Identification Mark on Do. ✓  
 Material of tunnel shafts ✓ Identification Marks on Do. ✓ Material of screw shafts ✓ Identification Marks on Do. ✓

Is the flash point of the oil to be used over 150° F. YES.

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. These auxiliary engines have been constructed under special survey and in accordance with the Rules. The workmanship and materials are sound and good. The engines have been tried under working conditions in the shop with satisfactory results and are in my opinion eligible to be fitted in a classed vessel.  
 THE ENGINES HAVE BEEN SECURED ON BOARD IN A SATISFACTORY MANNER THEY HAVE BEEN TRIED UNDER FULL WORKING CONDITIONS AND WERE FOUND IN GOOD AND SAFE WORKING CONDITION

The amount of Entry Fee ... £ ~~10~~ 10/6 When applied for,  
 Special ... £ 5 May 25th 1922 Hgk  
 Donkey Boiler Fee ... £ 10/6 When received.  
 Travelling Expenses (if any) £ 10/6 See Phil. report

*H. A. Rodd*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned

See Phil. 4376



Date of writing R  
 No. in Sur  
 Reg. Book.  
 on th  
 Master W.M.  
 Boilers made  
 Owners ANA  
 VERTICAL  
 Made at PHILA  
 tested by hydra  
 No. of safety va  
 enter the donkey  
 strength 28.32  
 Lap of plating  
 Radius of do.  
 Thickness of fu  
 plates 9/16  
 Thickness of wa  
 Dates of Survey while building  
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GENERA  
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 Survey  
 Travellin  
 Committ  
 Assigned

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