

AUX: REPORT ON OIL ENGINE MACHINERY.

No. 21202

MON JUL 31 1922

Date of writing Report JULY 11th 1922 When handed in at Local Office JULY 11th 1922 Port of NEW YORK N.Y.

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 39 6th JULY 1922

on the Single Screw vessel "MISSOURIAN" Tons Gross 7899
Triple Net 4915

Master CHESTER PA Built at CHESTER PA By whom built MERCHANT S.B. CORP. Yard No. 386 When built 1922

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

Donkey Boilers made at PHILADELPHIA By whom made THE WM. CRAMP & SONS S.I.E. B. CO. Boiler No. 498 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 AUX! DIESEL NON REVERSIBLE 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 500 LBS. No. of cylinders 2 No. of cranks 2 Diameter of cylinders 325^{mm}

Length of stroke 350^{mm} 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^{mm}

Distance between centres of main bearings 600^{mm} Is a flywheel fitted YES Diameter of crank shaft journals as per Rule 168^{mm}
as fitted 170^{mm}

Diameter of crank pins 190^{mm} Breadth of crank webs as per Rule 380^{mm} Thickness of ditto as per Rule 92^{mm}
as fitted

Diameter of flywheel shaft as per Rule 168^{mm} Diameter of tunnel shaft as per Rule Diameter of thrust shaft as per Rule
as fitted 170^{mm} as fitted as fitted

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

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 disengaged Thickness of cylinder liners 29^{mm}

Are the cylinders fitted with safety valves Means of lubrication FORCED Are the exhaust pipes and silencers water cooled or lagged with

Non-conducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine EXHAUST

GUIDED UP FUNNEL ABOVE ENGINE CASING. 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 connections 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 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

Range of tensile strength thickness Working pressure by rules Is each receiver, which can be isolated,

Equipped with a safety valve as per Rule Can the internal surfaces of the receivers be examined What means are provided for cleaning their

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

IS A DONKEY BOILER FITTED?

HYDRAULIC TESTS:-

If so, is a report now forwarded?

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	18.4.21-22.4.21	WATER JACKETS	143	C. J. H.	
" " COVERS	16.5.21-26.5.21	"	143	C. J. H.	
" " JACKETS	12.10.21	"	143	C. J. H.	
" " PISTON WATER PASSAGES	12.10.21	"	143	C. J. H.	
MAIN COMPRESSORS—1st STAGE	16.5.21	TESTED UNDER			
2nd	16.5.21	WORKING COND.			
3rd	16.5.21				
AIR RECEIVERS—STARTING					
" INJECTION					
AIR PIPES	24.10.21			C. J. H.	
FUEL PIPES	24.10.21				
FUEL PUMPS	24.10.21				
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

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

YES.

Receivers

Separate Tanks

SPARE GEAR SEE REPORT ON MAIN ENGINES.

The foregoing is a correct description,

Alpha Verque Machine Co.

Manufacturer.

Dates of Survey while building
 During progress of work in shops - 1920: Nov 12, 24 Dec 17, 30 1921: Jan 10, 13, 24 Feb 17 Mar 4, 29 Apr 15, 18, 22, 28 May 16, 26 Oct 24 Nov 25
 During erection on board vessel - 1922: MAR. 10, 13, 15, 20, 29. APR: 4, 10, 19, 25, 28. MAY. 4, 10, 12, 17, 24, 31. JUNE. 6, 13, 20, 28.
 Total No. of visits July 6. 39.

Dates of Examination of principal parts—Cylinders 29.3.21 Covers 29.3.21 Pistons 15.4.21 Rods Connecting rods 15.4.21
 Crank shaft 17.2.21 Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings
 Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions 24.10.21
 Completion of fitting sea connections Stern tube Screw shaft and propeller
 Material of crank shaft STEEL Identification Mark on Do. C. J. H. 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.

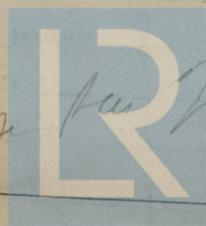
The amount of Entry Fee ... £ 5/6
 Special ... £
 Donkey Boiler Fee ... £
 Travelling Expenses (if any) £
 When applied for, 19
 When received, 19

J. G. Buchanan
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

See Phil. Rept 4418 New York, Jul. 18, 1922

Assigned



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