

Rpt. 4b

## REPORT ON OIL ENGINE MACHINERY.

No. 4376  
MON. APR. 29 1922

Received at London Office  
Date of writing Report MAY 5<sup>th</sup> 1922 When handed in at Local Office MAY 5<sup>th</sup> 1922 Port of PHILADELPHIA, PA.  
No. in Survey held at PHILADELPHIA, PA. Date, First Survey 6<sup>th</sup> Aug. 1920 Last Survey MAY 4<sup>th</sup> 1922  
Reg. Book. Number of Visits 148  
on the Single Screw vessels "CALIFORNIAN" Tons Gross 7899  
Triple Net 4915  
Master WM. LYONS Built at CHESTER, PA. By whom built MERCHANT S.B. YARD No. 385 When built 1922  
Engines made at PHILADELPHIA By whom made THE WM. CRAMPYSONS STEEL CO. Engine No. 496 When made 1922  
Donkey Boilers made at DO. By whom made DO. Boiler No. 496 When made 1922  
Brake Horse Power 2@1750=3500 Owners AMERICAN-HAWAIIAN S.S. CO. Port belonging to NEW YORK  
Nom. Horse Power as per Rule 856 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

OIL ENGINES, &c.—Type of Engines VERTICAL DIESEL OIL ENGINES or 4 stroke cycle 4 Single or double acting SINGLE  
Maximum pressure in cylinders 500 lbs. per sq. in. No. of cylinders 12 (6 port) No. of cranks 12 (6 port) Diameter of cylinders 29 1/8"  
Length of stroke 45 1/4" Revolutions per minute 115 Means of ignition AIR COMPRESSION Kind of fuel used CRUDE OIL  
(F.R. above 150°F)  
Is there a bearing between each crank YES Span of bearings (Page 92, Section 2, par. 7 of Rules) 39 1/8"  
Distance between centres of main bearings 59 1/8" Is a flywheel fitted YES Diameter of crank shaft journals as per Rule 17.4"  
as fitted 18"  
Diameter of crank pins 18" Breadth of crank webs as per Rule 23.14" Thickness of ditto as per Rule 9.74"  
as fitted 39" as fitted 11 3/4"  
Diameter of flywheel shaft as per Rule 17.4" Diameter of tunnel shaft as per Rule 13.5" Diameter of thrust shaft as per Rule 14.175"  
as fitted 18" as fitted 14" as fitted 14 1/2"  
Diameter of screw shaft as per Rule 14.4" Is the screw shaft fitted with a continuous liner the whole length of the stern tube NO  
as fitted 15"  
Is the after end of the liner made watertight in 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 — If without liners, is the shaft arranged to run in oil —  
Type of outer gland fitted to stern tube — Length of stern bush 66" Diameter of propeller 13'-6"  
Pitch of propeller 11'-9" No. of blades 4 state whether moveable NO Total surface 59.35 square feet  
Method of reversing DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Thickness of cylinder liners 2 3/8"  
Are the cylinders fitted with safety valves YES Means of lubrication FORCED LUBRICATION Are the exhaust pipes and silencers water cooled or lagged with  
non-conducting material BOTH If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine EXHAUST  
LED UP FUNNEL ABOVE ENGINE CASING No. of cooling water pumps 3 Is the sea suction provided with an efficient strainer which can be cleared  
within the vessel YES No. of bilge pumps fitted to the main engines NONE Diameter of ditto — Stroke —  
Can one be overhauled while the other is at work — No. of auxiliary pumps connected to the main bilge lines THREE How driven ELECTRO-MOTOR  
Sizes of pumps TWO 3 PLUNGER, 8 IN. No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 5-3 1/2", 3-4"  
and in holds, etc. FORD HOLD 8-3 1/2" AFTER HOLD 6-3 1/2" No. of ballast pumps ONE How driven ELECTRO-MOTOR Sizes of pumps ROTARY RING PUMP, 150 TONS  
Is the ballast pump fitted with a direct suction from the engine room bilges YES State size 6" Is a separate auxiliary pump suction fitted in  
Engine Room and size YES TWO 7" 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 VALVES Are they fixed sufficiently high on the ship's side to be seen without lifting the floor 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 all pipes, cocks, valves and pumps in connection with the machinery 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 TOP PLATFORM 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 ONE EACH ENG. No. of stages THREE Diameters 29 1/8", 26 1/8", 7 1/8" Stroke 13 3/4" Driven by MAIN ENGINES  
No. of auxiliary air compressors ONE No. of stages TWO Diameters 18 1/8", 15 1/8" Stroke 10 1/4" Driven by ELECTRO-MOTOR  
No. of small auxiliary air compressors ONE No. of stages TWO Diameters 4 3/8", 5 1/8" Stroke 3 1/8" Driven by STEAM ENGINE DIRECT COUPLED  
No. of scavenging air pumps NONE Diameter — Stroke — Driven by —  
Diameter of auxiliary Diesel Engine crank shafts as per Rule SEE N.Y.K. RPT. Are the air compressors and their coolers made so as to be easy of access YES  
as fitted —  
AIR RECEIVERS:—No. of high pressure air receivers TWO Internal diameter 18" Cubic capacity of each 30700 CUB. INCHES  
THREE FOUR 16" 2080 " "  
material O.H. STEEL Seamless, lap welded or riveted longitudinal joint SEAMLESS Range of tensile strength 26-30 TONS  
thickness 7/8", 3/4", 7/16" working pressure by Rules 90.7 ATM. 861 DLG No. of starting air receivers TWO Internal diameter 6'-0"  
Total cubic capacity 1600 CUB. FT. Material O.H. STEEL Seamless, lap welded or riveted longitudinal joint RIVETED  
Range of tensile strength 60,000 lbs. thickness 1 7/8" Working pressure by rules 358 lbs. Is each receiver, which can be isolated,  
fitted with a safety valve as per Rule YES Can the internal surfaces of the receivers be examined YES What means are provided for cleaning their  
inner surfaces MANHOLES Is there a drain arrangement fitted at the lowest part of each receiver YES



