

REPORT ON OIL ENGINE MACHINERY.

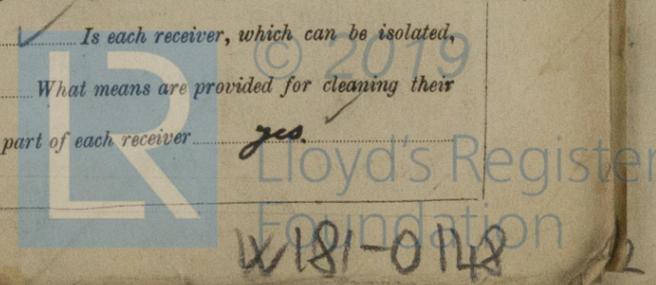
No. 28452

Received at London Office 21 JAN 1928

Date of writing Report 4 Jan 1928 When handed in at Local Office 4 Jan 1928 Port of New York
 No. in Survey held at New York Date, First Survey 15 July Last Survey 19 Dec 1927
 Reg. Book. 5210 on the Single Twin Triple Screw vessels J. A. MOFFETT JR. Tons Gross 9563
 Master Kearny R. J. Built at Hearny R. J. By whom built Federal S. B. Co. Yard No. 50 When built 1921
 Engines made at Hamilton, O. By whom made Hoover, Owens + Rentschler Engine No. 5401 When made 1927
 Donkey Boilers made at Bayonne R. J. By whom made Babcock + Wilcox Co. Boiler No. 5402 When made 1927
 Brake Horse Power 3300 total Owners Standard Shipping Co. Port belonging to New York
 Nom. Horse Power as per Rule 1053 total Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Type of Engines Diescl. Twin Screw 2 or 4 stroke cycle 2 Single or double acting single
 Maximum pressure in cylinders 500 lbs. No. of cylinders 4 each No. of cranks 4 each Diameter of cylinders 27 1/2"
 Length of stroke 47 1/4" Revolutions per minute 90 Means of ignition Compression Kind of fuel used Diesel Oil
 Is there a bearing between each crank yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 40 5/8"
 Distance between centres of main bearings 4'-11" Is a flywheel fitted yes 21900 lbs Diameter of crank shaft journals 7-7/8" as per Rule 17-32 ✓
 Diameter of crank pins 17 3/4" Breadth of crank webs 7-5/8" as per Rule 7-5/8" Thickness of ditto 11 1/2" as per Rule 10-82 ✓
 Diameter of flywheel shaft 17-32" as per Rule 17-32" Diameter of tunnel shaft 12-4" as per Rule 12-4" Diameter of thrust shaft 13" as per Rule 13" ✓
 Diameter of screw shaft 13-65" as per Rule 13-65" 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 watertight in the propeller boss yes ✓ If the liner is in more than one length are the joints burned yes ✓
 Does 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 ✓
 Are two liners are fitted, is the shaft lapped or protected between the liners yes ✓ If without liners, is the shaft arranged to run in oil yes ✓
 Type of outer gland fitted to stern tube none Length of stern bush 58" ✓ Diameter of propeller 15'-0" ✓
 Pitch of propeller 11'-9" to 14'-5" No. of blades 4 state whether moveable yes Total surface 71.2 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" ✓
 Are the cylinders fitted with safety valves yes ✓ Means of lubrication Forced ✓ Are the exhaust pipes and silencers water cooled or lagged with LED UP STACK
 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 LED UP STACK
 No. of cooling water pumps 2 each ✓ Is the sea suction provided with an efficient strainer which can be cleared yes ✓
 Are there bilge pumps on 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 yes ✓ No. of auxiliary pumps connected to the main bilge lines 3 ✓ How driven electric motor ✓
 Types of pumps Rotary ✓ No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 5-3 1/2", 2-2 1/2" ✓
 Are there pumps in holds, etc. Oil cargo pumping system No. of ballast pumps 1 ✓ How driven electric motor ✓ Sizes of pumps Rotary ✓
 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 yes ✓
 Engine Room and size 2-2" stem siphons 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 ✓ 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 yes ✓
 communication between the sea and the bilges yes ✓ Is the screw shaft tunnel watertight yes ✓ Is it fitted with a watertight door no tunnel ✓
 Is it leaked from yes ✓ If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes ✓
 No. of main air compressors One each eng. No. of stages 3 Diameters 7 1/2"-29 1/2"-33 1/2" Stroke 23 1/2" Driven by Main Engines ✓
 No. of auxiliary air compressors 2 No. of stages 3 Diameters 80-340-380 Stroke 250 H/M Driven by Aux ✓
 No. of small auxiliary air compressors 1 No. of stages 2 Diameters 1 1/2"-4 1/2" Stroke 5" Driven by electric motor ✓
 No. of scavenging air pumps 1 each engine Diameter 45" Stroke 55" Driven by main engine ✓
 COOPER & Co ENGINES 8000/12 as per Rule 6.7 Are the air compressors and their coolers made so as to be easy of access yes ✓
 Diameter of auxiliary Diesel Engine crank shafts 7 1/2" as fitted

RECEIVERS:—No. of high pressure air receivers 2 Internal diameter 15 3/4" Cubic capacity of each 7.9 cu. ft.
 Material steel Seamless, lap welded or riveted longitudinal joint seamless Range of tensile strength 26-30 tons
 Thickness 3/4" working pressure by Rules 1250 lbs. No. of starting air receivers 6 Internal diameter 39 3/8"
 Total cubic capacity 744 cu. ft. Material steel Seamless, lap welded or riveted longitudinal joint seamless
 Range of tensile strength 65000 lbs. thickness 1 3/8" Working pressure by rules 1130 lbs. Is each receiver, which can be isolated, yes ✓
 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 yes ✓
 surfaces Removable heads or manholes Is there a drain arrangement fitted at the lowest part of each receiver yes ✓



IS A DONKEY BOILER FITTED?

Yes (2)

If so, is a report now forwarded?

yes.

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	Oct 24 1925	500	850		
" " COVERS	Dec 21 1925	500	1000		
" " JACKETS.....		35	100		
" " PISTON WATER PASSAGES.....		42	100		
MAIN COMPRESSORS—1st STAGE.....		10	100		
" 2nd "		100	525		
" 3rd "		1100	1500		
AIR RECEIVERS—STARTING		1000	1700	LLOYD'S TEST	
" INJECTION		1000	2000	Y.S. DATE	
AIR PIPES		1100	2000	LLOYD'S TEST	
FUEL PIPES		400	800		
FUEL PUMPS		1250	2000		
SILENCER		1250	2000		
" WATER JACKET					
SEPARATE FUEL TANKS					

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

Yes

Receivers

yes

Separate Tanks

SPARE GEAR

The Spare Gear required by Rules has been supplied on board, together with extra spare parts as shown on list attached to Cleveland report 391 herewith.

The foregoing is a correct description.

Tietjen and Lang Dry Dock Co.

Spec by Raymond Pres Manufacturer.

Dates of Survey while building: During progress of work in shops - 1927 July 15, 20, 25 Aug 12, 16, 20, 31 Sept 6, 9, 12, 13, 20, 24 Oct 3, 7, 17, 19, 22, 24, 28, 31 Nov 1, 3, 4, 5, 7, 11, 15 Dec 1, 17, 19, 21, 24, 27, 29
Total No. of visits 36

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods

Crank shaft Thrust shaft 24/10/27 Tunnel shafts 24/10/27 Screw shaft 12/8/27 Propeller 12/8/27 Stern tube 12/8/27 Engine seatings 24/9/27

Engines holding down bolts 7/11/27 Completion of pumping arrangements 21/12/27 Engines tried under working conditions 29/12/27

Completion of fitting sea connections 20/8/27 Stern tube 16/8/27 Screw shaft and propeller 20/8/27

Material of crank shaft Identification Mark on Do. Material of thrust shaft steel Identification Mark on Do. LLOYD'S H.C.H. 15.4.26

Material of tunnel shafts steel Identification Marks on Do. LLOYD'S WJF 11.19.25 Material of screw shafts steel Identification Marks on Do. LLOYD'S WJF 2.18.26

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

Is this machinery duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) These Main + Auxiliary Diesel Engines have been built under Special Survey in accordance with the Rules & approved plans, as per Cleveland report 391 herewith.

They have now been fitted on board in accordance with the Rules & approved plans & the workmanship & material are good. They have been satisfactorily tried at sea at full power, & they are now in good & safe working condition & eligible, in our opinion, to receive the notations + N.E. 12.27, + LMC 12.27 & 2 WT D.B. 27 - 250 lbs in the Register Book, subject to the water tube donkey boilers being annually surveyed.

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £	\$165 ⁰⁰	13/11	1928
Donkey Boiler Fee ... £	135 ⁰⁰		When received,
Travelling Expenses (if any) £	:	:	19

John S. Heck
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JAN 11 1928

Assigned + N.E. 12.27



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Note - Oil Engine