

# REPORT ON OIL ENGINE MACHINERY.

No. 424

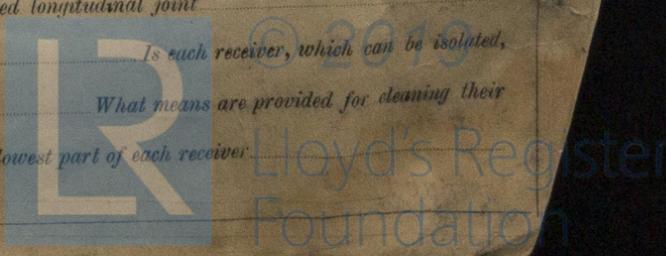
Received at London Office 23 JUN 1928  
Date of Report 21 May 1928 When handed in at Local Office 19 Port of Cleveland Ohio  
Date, First Survey Mar. 16 Last Survey Apr. 20 1928  
Number of Visits 5

Survey held at Grove City, Pa  
on the ~~Triple~~ <sup>Single</sup> Screw vessels (Not stated)  
Tons Gross \_\_\_\_\_ Net \_\_\_\_\_  
Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ Yard No. \_\_\_\_\_ When built \_\_\_\_\_  
Engines made at Grove City By whom made Bessemer Gas Eng. Co. Engine No. 427 When made 1928-4  
Donkey Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
Brake Horse Power 450 Owners Nicholson Transit Coy. Port belonging to Detroit  
Nom. Horse Power as per Rule 115 Is Refrigerating Machinery fitted for cargo purposes  Is Electric Light fitted

**IL ENGINES, &c.**—Type of Engines Bessemer Diesel Type. K.R. 6 2 or 4 stroke cycle 4 Single or double acting 8  
Maximum pressure in cylinders 550# No. of cylinders 6 No. of cranks 6 Diameter of cylinders 14"  
Length of stroke 18 Revolutions per minute 245 Means of ignition Solid injection 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) 14.25"  
Distance between centres of main bearings 24" Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 8" as fitted 10"  
Diameter of crank pins 10" Breadth of crank webs as per Rule 10.64" as fitted 12 1/2" Thickness of ditto as per Rule 4.48" as fitted 5 1/4"  
Diameter of flywheel shaft as per Rule 8" as fitted 10" 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 Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners 1"  
Are the cylinders fitted with safety valves Yes Means of lubrication Forced feed 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  
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 suctions 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 funnel 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 15 HP. Elect. Motor

**R 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  
Height of tensile strength thickness Working pressure by rules Is each receiver, which can be isolated,  
fitted with a safety valve as per Rule Can the internal surfaces of the receivers be examined What means are provided for cleaning their  
interior surfaces Is there a drain arrangement fitted at the lowest part of each receiver

EL20-162M



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARK.
ENGINE CYLINDERS .....		550 #	45 #		The tests were not witnessed by the undersigned
" " COVERS .....		550 #	45 #		
" " JACKETS .....		15 #	45 #		
" PISTON WATER PASSAGES .....					
MAIN COMPRESSORS—1st STAGE .....					
" 2nd " .....		250 #			
" 3rd " .....					
AIR RECEIVERS—STARTING .....					
" INJECTION .....					
AIR PIPES .....		250 #			
FUEL PIPES .....		1000 #			
FUEL PUMPS .....		4000 #			
SILENCER .....					
" WATER JACKET .....					
SEPARATE FUEL TANKS .....					

PLANS. Are approved plans forwarded herewith for shafting no. Receivers no. Separate Tanks no.  
(If not, state date of approval)

SPARE GEAR

The foregoing is a correct description,  
 The Gas Engine Co  
Manufacturers

Dates of Survey while building: During progress of work in shops - - March 16, 17, April 5, 6, 7, 20  
 During erection on board vessel - - - 5  
 Total No. of visits 5

Dates of Examination of principal parts—Cylinders Mar. 16 to Apr. 20 Covers Apr. 20 Pistons Apr. 20 Rods Apr. 20 Connecting rods Apr. 20  
 Crank shaft Mar. 16 to Apr. 20 Thrust shaft Mar. 16 to Apr. 20 Tunnel shafts Mar. 16 to Apr. 20 Screw shaft Mar. 16 to Apr. 20 Propeller Mar. 16 to Apr. 20 Stern tube Mar. 16 to Apr. 20 Engine seatings Mar. 16 to Apr. 20  
 Engines holding down bolts Mar. 16 to Apr. 20 Completion of pumping arrangements Mar. 16 to Apr. 20 Engines tried under working conditions Mar. 16 to Apr. 20  
 Completion of fitting sea connections Mar. 16 to Apr. 20 Stern tube Mar. 16 to Apr. 20 Screw shaft and propeller Mar. 16 to Apr. 20  
 Material of crank shaft Steel Identification Mark on Do. LLOYDS 434-732-28 Material of thrust shaft Steel Identification Mark on Do. LLOYDS 434-732-28  
 Material of tunnel shafts Steel Identification Marks on Do. LLOYDS 434-732-28 Material of screw shafts Steel Identification Marks on Do. LLOYDS 434-732-28

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

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 above engines have been built under special survey. The materials & workmanship employed in their construction were found to be sound & efficient. The vessel for which they are intended is not classed with this Society.

The amount of Entry Fee ... £ : : When applied for,  
 Special ... \$159.00 : : 31 May 28  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) \$40.00 : : 19

G. Drummond  
 Engineer Surveyor to Lloyd's Register of Shipping.



Committee's Minute NEW YORK JUN 13 1928

signed Transmit to London

Copies (if required) to be sent to