

REPORT ON OIL ENGINE MACHINERY.

No. 303

19 OCT 1929

Received at London Office

Date of writing Report 19. When handed in at Local Office 19. Port of CHICAGO, ILL.
 Date, First Survey AUG. 21, Last Survey AUG. 29 1929. Number of Visits 3
 No. in Survey held at Beloit Wis
 Reg. Book. on the Single Screw vessels M. V. "Port Waikato" Tons Gross Net
 Master Leith Built at Leith By whom built H. Robb Ltd Yard No. 113 When built 1929
 Engines made at BELOIT, WIS. By whom made FAIRBANKS, MORSE & CO. Engine No. 734859 When made 1929
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Brake Horse Power 520 Owners CAPT. W. WATCHLIN, LEITH Port belonging to SCOTLAND
 Nom. Horse Power as per Rule 180 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted 20 KW. SET

OIL ENGINES, &c.—Type of Engines MARINE DIESEL 2 or 4 stroke cycle 2 Single or double acting SINGLE
 Maximum pressure in cylinders 420 lbs. 0" No. of cylinders 4 No. of cranks 4 Diameter of cylinders 16"
 Length of stroke 20" Revolutions per minute 250 Means of ignition COMPRESSION Kind of fuel used BAUME 24° to 38°
 Is there a bearing between each crank YES Span of bearings (Page 92, Section 2, par. 7 of Rules) 10 5/16" 19 3/4"
 Distance between centres of main bearings 30" Is a flywheel fitted YES Diameter of crank shaft journals 10" as per Rule 10" as fitted
 Diameter of crank pins 10" Breadth of crank webs 13" as per Rule 13" Thickness of ditto 7/8" as per Rule 7/8" as fitted
 Diameter of flywheel shaft 9" as per Rule 9" Diameter of tunnel shaft app. 7 1/2" as per Rule 9" as fitted
 Diameter of screw shaft app. 6 9/16" as per Rule app. 6 9/16" 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 87" app.
 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 2" MEAN
 Are the cylinders fitted with safety valves NO Means of lubrication FORCE FEED ELSEWHERE Are the exhaust pipes and silencers water cooled or lagged with non-conducting material COOLED 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 ONE 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 ONE Diameter of ditto 3 1/4" Stroke 4 1/4"
 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 ✓

AIR RECEIVERS:—No. of high pressure air receivers ONE Internal diameter 32" Range of tensile strength ✓
 material Seamless, lap welded or riveted longitudinal joint No. of starting air receivers ✓ Internal diameter ✓
 thickness working pressure by Rules Seamless, lap welded or riveted longitudinal joint ✓
 Total cubic capacity Material Working pressure by rules ✓ Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓
 Range of tensile strength thickness What means are provided for cleaning their inner surfaces ✓
 Can the internal surfaces of the receivers be examined ✓ Is there a drain arrangement fitted at the lowest part of each receiver ✓

Are the air compressors and their coolers made so as to be easy of access YES
 FAIRBANKS, MORSE ENGRS. REPAIRERS BLACKSTONE 3 cyl. Air Compressor.
 2 7/8" Dia Crankshaft. 4 5/8" Dia Cyl x 6" stroke fitted D.D.M. 2638. 10-46.

013057-013062-0257

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			CYL. WALLS MEASURED		
" " COVERS			125		
" " JACKETS			125		
" PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st STAGE					
" 2nd					
" 3rd					
AIR RECEIVERS—STARTING					
" INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting **YES** Receivers Separate Tanks
 (If not, state date of approval)
 SPARE GEAR *Actual items as tested in Rules are attached herewith.*

The foregoing is a correct description,

CERTIFIED CORRECT
 FAIRBANKS, MORSE & CO.,
 PER *J.J. [Signature]* Sept. 13th

Dates of Survey while building
 { During progress of work in shops - -
 { During erection on board vessel - -
 Total No. of visits

THREE (3)

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
 Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings
 Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions
 Completion of fitting sea connections Stern tube Screw shaft and propeller
 Material of crank shaft Identification Mark on Do. Material of thrust shaft Identification Mark on Do. **LR-WJW Aug 29, 1929**
 Material of tunnel shafts Identification Marks on Do. **LR. W.J.W. Aug 29 1929** Material of screw shafts Identification Marks on Do.

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. *This engine has been built under Special Survey with the rules and approved plans, and the workmanship and materials, in my opinion, are satisfactory. If installed in a vessel classed by this Society it may be given the notation of LMC (LLOYD'S MACHINERY CERTIFICATE) 6/29.*)

Certificate (if required) to be sent to
 (The Surveys are reported to the Committee's Minute.)

The amount of Entry Fee ... **225.00** : When applied for, **SEPT. 1929**
 Special ... £ : :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) **46.68** : When received, **14.12.29**

NEW YORK OCT 9 - 1929
ASMA
[Signature]

W.J. Wood
 Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 10 DEC 1929

Committee's Minute

Assigned *Transmit to London*

See Lth. 28 up to 1970's
 Lloyd's Register Foundation

