

# REPORT ON OIL ENGINE MACHINERY.

No. 89173

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No. in survey held at St. Yarmouth Date, First Survey 22<sup>nd</sup> July Last Survey 29<sup>th</sup> July 1925

Reg. Book 15970 on the Single } Screw vessels Steel Aux. 3. Mat. Sh. "Largo Shipper" Number of Visits 4 Tons { Gross  
Twin }  
Triple } Net

Master ✓ Built at Martenshoek By whom built G. & H. Bodewes Yard No. ✓ When built 1919

Engines made at Spurwich By whom made Vickers-Petter Ltd. Engine No. ✓ When made 1919

Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓

Brake Horse Power 152 Owners A. Redone & Co. Port belonging to Buenos Aires

Nom. Horse Power as per Rule 43 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

OIL ENGINES, &c.—Type of Engines Semi Diesel 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 300 No. of cylinders 4 No. of cranks 4 Diameter of cylinders 12"

Length of stroke 14" Revolutions per minute 300 Means of ignition Hot bulb. Kind of fuel used Gas oil.

Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 14 3/16"

Distance between centres of main bearings 24" Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 5 7/8"  
as fitted 5 7/8"

Diameter of crank pins 5 1/4" Breadth of crank webs as per Rule 8 3/4" Thickness of ditto as per Rule 3 1/4"  
as fitted 8 3/4" as fitted 3 1/4"

Diameter of flywheel shaft as per Rule 5 5/8" Diameter of tunnel shaft as per Rule ✓ Diameter of thrust shaft as per Rule 5 1/4"  
as fitted 5 5/8" as fitted ✓ as fitted 5 1/4"

Diameter of screw shaft as per Rule 5 5/8" Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner ✓  
as fitted 5 5/8"

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 ✓

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 Yes ✓

Type of outer gland fitted to stern tube Bunton Length of stern bush 22 1/2" Diameter of propeller 4'-0" ✓

Pitch of propeller 3'-6" No. of blades 4 state whether moveable No Total surface 8 1/2 square feet

Method of reversing Aw Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes ✓ Thickness of cylinder liners 3/8"

Are the cylinders fitted with safety valves Yes ✓ Means of lubrication Lubed. ✓ Are the exhaust pipes and silencers water cooled or lagged with non-conducting material water cooled ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Exhaust up funnel. ✓

Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes ✓ No. of cooling water pumps one 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 one Diameter of ditto 4" Stroke 3 1/4 stroke ✓

Can one be overhauled while the other is at work ✓ No. of auxiliary pumps connected to the main bilge lines one How driven Single cylinder oil engine ✓

Sizes of pumps 4 dia. x 5 1/4 stroke No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 1-2 1/4 dia. ✓  
and in holds, Two. 2 1/2 dia. ✓

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 No Yes 2 1/2 dia. 7 1/2 stroke ✓

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 ✓ Are all connections with the sea direct on the skin of the ship Yes ✓

Are they valves or cocks Both ✓ 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 ✓ 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 one No. of stages 2 Diameters 2 3/4 + 6" Stroke 2 1/2 Driven by Single cylinder oil engine ✓

No. of scavenging air pumps ✓ Diameter ✓ Stroke ✓ Driven by ✓

Diameter of auxiliary Diesel Engine crank shafts as per Rule ✓ Are the air compressors and their coolers made so as to be easy of access ✓  
as fitted ✓

AIR RECEIVERS:—No. of high pressure air receivers ✓ Internal diameter ✓ Cubic capacity of each ✓

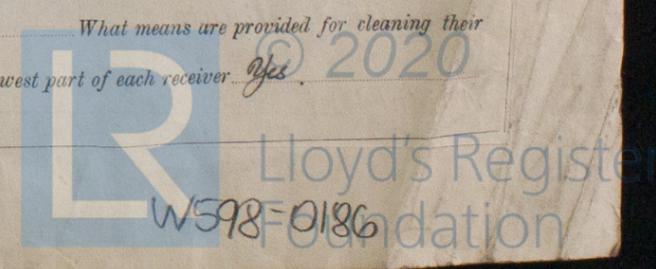
material ✓ Seamless, lap welded or riveted longitudinal joint ✓ Range of tensile strength ✓

thickness ✓ working pressure by Rules ✓ No. of starting air receivers Bottles 3 Internal diameter 11 1/2

Total cubic capacity 275 each bottle Material Steel Seamless, lap welded or riveted longitudinal joint Seamless

Range of tensile strength ✓ thickness 1/4" Working pressure by rules 500 @ 28 tons 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 No ✓ What means are provided for cleaning their inner surfaces None ✓

Is there a drain arrangement fitted at the lowest part of each receiver Yes ✓



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION	DATE OF TEST	WORKING PRESSURE	TEST PRESSURE	STAMPED	REMARKS
ENGINE CYLINDERS .....					
"    "    COVERS .....					
"    "    JACKETS.....					
"    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*  
(If not, state date of approval)

Receivers

Separate Tanks *Daily supply tanks*

SPARE GEAR

*As per attached list, examined + checked. also a spare propeller shaft placed on board, surveyed by Bureau Veritas. Certificate attached hereto.*

The foregoing is a correct description,

Manufacturer.

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

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 *Steel*      Identification Mark on Do.       Material of thrust shaft *Steel*      Identification Mark on Do.

Material of tunnel shafts      Identification Marks on Do.       Material of screw shafts *Steel*      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 *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*These engines were constructed under the Bureau Veritas Survey, + are similar to a set now being constructed at the same builder, under this Society's Survey.*

*The working parts have been opened out + examined, the pumping arrangements found satisfactory. Engines tried under working conditions, + are now eligible in my opinion for the record of L.M.C. 7.25*

*The oil fuel tanks were partly filled with oil, they were made by the builder of the vessel, plans of same not obtainable. the plating is 1/8". Stems double riveted, 5/16" stems 1 1/8" fitted. they are stiffened with angle bars riveted to sides + tie plates. + in my opinion are efficient.*

The amount of Entry Fee ... £ : : When applied for,  
Special fee for class... £ 10 : 0 : *15 AUG 1925*  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ 2 : 0 : 0 *6.8.25 JSL*

*A.E. Farmer*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 11 AUG 1925**

**FRI. 1 JAN 1926**  
**TUES. 15 FEB 1927**

Assigned *See other report*  
*James No.*



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Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)