

# REPORT ON OIL ENGINE MACHINERY

No. 6861

26 OCT. 1925

Date of writing Report 17<sup>th</sup> Oct 1925 When handed in at Local Office 19<sup>th</sup> Oct 1925 Port of Trieste Received at London Office

No. in Survey held at Trieste Reg. Book. 25688 on the <sup>Single</sup> Twin <sub>Triple</sub> Screw vessels "LEME" Date, First Survey 14<sup>th</sup> Dec 1924 Last Survey 7<sup>th</sup> Oct 1925 Number of Visits 63

Master Built at Trieste By whom built Stabilimento Tecnico Triestino Yard No. 443 When built 1925 Tons Gross 8652 Net 5303

Engines made at Legnano By whom made Franco Lodi Engine No. \* When made \* Donkey Boilers made at <sup>Large</sup> <sup>Small</sup> <sup>Annular</sup> <sup>Annular</sup> By whom made <sup>Lochner & Co.</sup> <sup>Lochner & Co.</sup> Boiler No. 9891 When made 1924.

Brake Horse Power \* Owners Navigazione Libera Triestina Port belonging to Trieste

Nom. Horse Power as per Rule 694 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.

Where marked with asterisk, please see Genoa Rpt. No 8654, 25-1-24. IL ENGINES, &c.—Type of Engines Lodi Diesel 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders No. of cylinders 12.—6 per engine No. of cranks 12. Diameter of cylinders \*

Length of stroke \* Revolutions per minute 125 Means of ignition Kind of fuel used Heavy oil

Is there a bearing between each crank \* Span of bearings (Page 92, Section 2, par. 7 of Rules) \* Distance between centres of main bearings \* Is a flywheel fitted Yes. Diameter of crank shaft journals as per Rule \* as fitted \*

Diameter of crank pins \* Breadth of crank webs as per Rule \* as fitted \* Thickness of ditto as per Rule \* as fitted \*

Diameter of flywheel shaft as per Rule \* as fitted \* Diameter of tunnel shaft as per Rule 244 mm. as fitted 3 x 295 and 5 x 315 each side Diameter of thrust shaft as per Rule 250 mm. as fitted 304 mm. ✓

Diameter of screw shaft as per Rule 268 mm. as fitted 315 mm. ✓ 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 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 None ✓ Length of stern bush 1260 mm. ✓ Diameter of propeller 11'6" ✓

Pitch of propeller No. of blades 4 state whether moveable Yes. ✓ Total surface square feet Method of reversing direct air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. ✓ Thickness of cylinder liners \*

Are the cylinders fitted with safety valves Yes. ✓ Means of lubrication forced ✓ Are the exhaust pipes and silencers water cooled or lagged with 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 Exhaust to funnel ✓

No. of cooling water pumps 2 for pistons 2 for cylinders ✓ 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 3 ✓ How driven electric motor. ✓

Sizes of pumps {BILGE. 3 x 150 x 200 BALLAST. 2 x 240 x 230 4.5 1 x 125 x 180 No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 2 x 80 mm. BILGE PUMP DIRECT SUCTION - 80 mm. and in holds, etc. h1 - 2 x 75, h2 - 2 x 70, h3 - 2 x 70, h4 - 2 x 70 No. of ballast pumps 1 ✓ How driven electric motor. ✓ Sizes of pumps 3 x 240 x 230 h5 - DEPTANK 2 x 70 h6 - 2 x 70 h7 - 2 x 70 h8 - 2 x 70

Is the ballast pump fitted with a direct suction from the engine room bilges Yes. ✓ State size 200 mm. ✓ Is a separate auxiliary pump suction fitted in Engine Room and size Yes. ✓ 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 Is the screw shaft tunnel watertight Yes. ✓ Is it fitted with a watertight door Yes. ✓

worked from grating near top of engine room If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

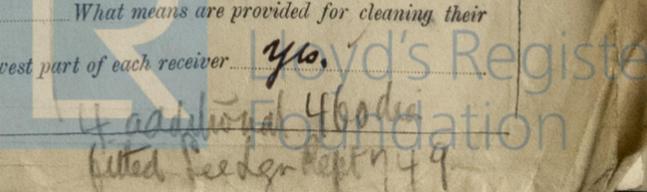
No. of main air compressors 2 ✓ No. of stages 3 ✓ Diameters \* Stroke \* Driven by main engines No. of auxiliary air compressors 1 Renewall ✓ No. of stages 3 ✓ Diameters 12 1/2 (2) x 8 x 4 Stroke 7" Driven by electric motor. No. of small auxiliary air compressors 1 ✓ No. of stages 2 ✓ Diameters 150 x 58 mm. Stroke 58 mm. Driven by steam engine

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

Diameter of auxiliary Diesel Engine crank shafts as per Rule 194 mm. as fitted 205 mm. Are the air compressors and their coolers made so as to be easy of access Yes. ✓

IR RECEIVERS:—No. of high pressure air receivers 2. INJECTION for main engines 2. for aux. engines 2. Internal diameter for main engs. 2 - 460 mm. 1 - 308.5 mm. for aux. engs. 2 - 184 mm. Cubic capacity of each 800 litres ca. 165 litres ca. 30 litres

material Steel Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength 45-50 Kg./mm<sup>2</sup> 12 - main engine 460 mm. 4 - aux. engine Internal diameter - 290 mm. thickness 20 mm. main 14 mm. aux. Working pressure by rules 855 lb./sq. in. 75 Kg./sq. cm. Is each receiver, which can be isolated, fitted with a safety valve as per Rule Safety valves on compressors ✓ Can the internal surfaces of the receivers be examined Yes. ✓ 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? *Yes.* If so, is a report now forwarded? *Yes.*

HYDRAULIC TESTS:— *See Genl Rpt. 8654.*

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 .....	<i>17.7.25 &amp; 22.7.25</i>		<i>5 1/20/10"</i>	<i>6036, 37, 38, 39.</i>	<i>4 tanks.</i>

PLANS. Are approved plans forwarded herewith for shafting *Yes.* Receivers *Yes.* Separate Tanks *Yes.*

SPARE GEAR *See attached list.*

- To complete the spare gear the following parts require to be supplied—
- 2 connecting rod bolts and nuts for main engines. X
  - 1 set connecting bolts for crank shaft. X
  - 1 expansion escape valve for main engines
  - 2 connecting rod bolts and nuts for aux. engines. X

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
 During progress of work in shops— *1924 Dec 16, 1925 Jan 15, Feb 5, July 17, 21, Aug 28, Sep 2, 4, 5, 19.*  
 During erection on board vessel— *1924 Dec 15, 24, 1925 Jan 14, 19, 28, Feb 2, 4, 16, 26, Mar 5, 11, 13, 17, 30, Apr 25, May 7, 11, July 3, 15, 22, 30, Aug 4, 6, 8, 11, 20, 22, 26, 28, Sep 2, 3, 7, 8, 9, 10, 11, 12, 15, 17, 19, 23, 24, 25, 28, 28, 29, 29, 30, Oct 3, 3, 5, 6, 7*  
 Total No. of visits *Sixty three*

Dates of Examination of principal parts—Cylinders \* Covers \* Pistons \* Rods \* Connecting rods \*  
 Crank shaft \* Thrust shaft *3-7-25* Tunnel shafts *5-2-25* Screw shafts *6-21* Propellers *21-7-25* Stern tube *5-3-25* Engine seatings *PART. 4-2 STAR 2-2*  
 Engines holding down bolts *3-7-25* Completion of pumping arrangements *28-8-25* Engines tried under working conditions *7-10-25*  
 Completion of fitting sea connections *24-12-24* Stern tube *PORT. 5-3-25 STAR 26-2-25* Screw shaft and propeller *9-9-25*  
 Material of crank shaft *Steel* Identification Mark on Do. *{ 1256, 1257* Material of thrust shaft *Steel* Identification Mark on Do.  
 Material of tunnel shafts *Steel* Identification Marks on Do. *See list* 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 *Yes.* If so, state name of vessel *"Lycamore"*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The main and auxiliary engines and air receiver have been fitted on board in accordance with approved plans and Secretary's letter, and on completion, tested under full working conditions with satisfactory results. The machinery of this vessel is eligible in our opinion to be classed in the Register Book, with notation +LMC 10.25, subject to the spare gear being completed on the vessel's arrival at Genoa. See above. The owner's representative states that the spare gear will be completed on the vessel's arrival at Genoa.*

*Donkey fuel.*

The amount of Entry Fee ... £ *721-00* When applied for, *(RI)*  
 pt Special ... £ *3330-00* *22/10/1925*  
 2 Donkey Boilers Fee ... £ *720-00*  
 Travelling Expenses (if any) £ *120-00* When received, *22/12/25*

Committee's Minute *FRI. 30 OCT 1925*  
 Assigned *+ L.M.B. 1025- signed C.L. oil engines*

*Prof. Wilson & V. Locking*  
 Engineer Surveyor to Lloyd's Register of Shipping.

*TUES. 26 JAN 1926*  
*FRI. 16 JUL 1926*  
*FRI. 25 JUN 1925*



Lloyd's Register Foundation

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