

pt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 19140

Received at London Office **178 AUG 1950**
MIDDLESBROUGH.

Date of writing Report **25th July 1950**. When handed in at Local Office **4th August 1950** Port of **MIDDLESBROUGH.**

Survey held at **MIDDLESBROUGH.** Date, First Survey **8th February,** Last Survey **27th July, 1950.**
Number of Visits **54**

on the **Single** Screw vessel **m.v. "LUMEN".** Tons **Gross 10146.25**
Triple **Net 5864.66**
Quadruple

built at **South Bank** By whom built **Smith's Dock Co. Ltd.** Yard No. **1197** When built **1950**

engines made at **Newcastle-on-Tyne** By whom made **R. & W. Hawthorne Leslie & Co.** Engine No. **4059** When made **1950**

monkey Boilers made at **West Hartlepool** By whom made **Central Marine Engine Works Ltd.** Boiler No. **R.396** When made **1949**
4750 Estimated

brake Horse Power **4400 Service** Owners **The Lustrous Steamship Co. Ltd.** Port belonging to **Liverpool**

N. Power as per Rule **902** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

trade for which vessel is intended **Tanker**

L ENGINES, &c.—Type of Engines **2 or 4 stroke cycle** Single or double acting **Single**

Minimum pressure in cylinders **116 estimated** Diameter of cylinders **112 service** Length of stroke **112 service** No. of cylinders **112 service** No. of cranks **112 service**

Indicated Pressure **116 estimated** Ahead Firing Order in Cylinders **112 service** Span of bearings, adjacent to the crank, measured **116 estimated**
from inner edge to inner edge **112 service** Is there a bearing between each crank **112 service** Revolutions per minute **112 service**

Flywheel dia. **112 service** Weight **112 service** Moment of inertia of flywheel (**112 service** lbs.in² or Kg.cm.²) **112 service** Means of ignition **112 service** Kind of fuel used **112 service**

Crank dia. **112 service** dia. of journals **112 service** as per Rule **112 service** Crank pin dia. **112 service** Mid. length breadth **112 service** Thickness parallel to axis **112 service**
as fitted **112 service** Crank webs **112 service** Mid. length thickness **112 service** shrunk **112 service** Thickness around eyelets **112 service**

Propeller Shaft, diameter **112 service** as per Rule **112 service** Intermediate Shafts, diameter **112 service** as per Rule **112 service** Thrust Shaft, diameter at collars **112 service** as fitted **112 service**
as fitted **112 service** as per Rule **112 service** as fitted **112 service** as per Rule **112 service**

Propeller Shaft, diameter **112 service** as per Rule **112 service** Screw Shaft, diameter **112 service** as per Rule **112 service** Is the **112 service** tube **112 service** shaft fitted with a continuous liner **112 service**
as fitted **112 service** as fitted **112 service** as fitted **112 service** as per Rule **112 service**

Propeller Liners, thickness in way of bushes **112 service** as per Rule **112 service** Thickness between bushes **112 service** as per Rule **112 service** Is the after end of the liner made watertight in the **112 service**
propeller boss **112 service** as fitted **112 service** as fitted **112 service** as fitted **112 service**

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **112 service**
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 **112 service** If two liners are fitted, is the shaft lapped or protected between the liners **112 service** Is an approved Oil Gland or other appliance fitted at the after
end of tube shaft **112 service** If so, state type **112 service** Length of bearing in Stern Bush next to and supporting propeller **112 service**

Propeller, dia. **112 service** Pitch **112 service** No. of blades **112 service** Material **112 service** whether moveable **112 service** Total developed surface **112 service** sq. feet **112 service**
Moment of inertia of propeller (**112 service** lbs.in² or Kg.cm.²) **112 service** Kind of damper, if fitted **112 service**

Method of reversing Engines **112 service** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **112 service** Means of
reversing **112 service** Thickness of cylinder liners **112 service** Are the cylinders fitted with safety valves **112 service** Are the exhaust pipes and silencers water cooled
lagged with non-conducting material **112 service** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
back to the engine **112 service**

Cooling Water Pumps, No. **2** **1-ME Driven** **1-10" x 12" x 12"** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**
Bilge Pumps worked from the Main Engines, No. **None** Diameter **-** Stroke **-** Can one be overhauled while the other is at work **-**

Pumps connected to the Main Bilge Line **1-10" x 12" x 12"** No. and size **1-Ballst 10" x 12" x 12"** **1 Bilge & Sanitary 8" x 8" x 10"**
How driven **steam**

Is the cooling water led to the bilges **No** If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
arrangements **-**

Oil Pumps, No. and size **1-10" x 12" x 12"** Power Driven Lubricating Oil Pumps, including spare pump, No. and size **1-M.E. Driven**
1-Weirs 9" x 8" x 18"

Are two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both main bilge pumps and auxiliary
oil pumps, No. and size:—In machinery spaces **3-3" Bilge Suctions, 3-2" Cef. Suctions & In pump room Aft 2-4" Ford**
holds, &c. **1-6" fore peak, 1-5 1/2" aft. peak, 2-2 1/2" Fore hold, 1-2 1/2" chain locker, 2-2 1/2" store, 1-7" cofferdam**

Independent Power Pump Direct Suctions to the engine room bilges, No. and size **2 - 5"** p & s **6" opp**

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes **Yes** Are the bilge suction pipes in the machinery spaces led from easily
accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **Yes**

Are all Sea Connections fitted direct on the skin of the Ship **Yes** Are they fitted with valves or cocks **Both** Are they fixed
sufficiently high on the ship's side to be seen without lifting the platform plates **Yes** Are the overboard discharges above or below the deep water line **Below**
Are they each fitted with a discharge valve always accessible on the plating of the vessel **Yes** Are the blow off cocks fitted with a spigot and brass covering plate **Yes**

Are all pipes pass through the bunkers **None** How are they protected **-**

Are all pipes pass through the deep tanks **None** Have they been tested as per Rule **-**

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times **Yes**

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery
spaces, or from one compartment to another **Yes** Is the shaft tunnel watertight **-** Is it fitted with a watertight door **-** worked from **-**

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork **-**

Auxiliary Air Compressors, No. **2 - Reavell** No. of stages **2** diameters **4 1/2" : 10 1/2"** stroke **8"** driven by **Steam**
(Readers)

Auxiliary Air Compressors, No. **None** No. of stages **-** diameters **-** stroke **-** driven by **-**

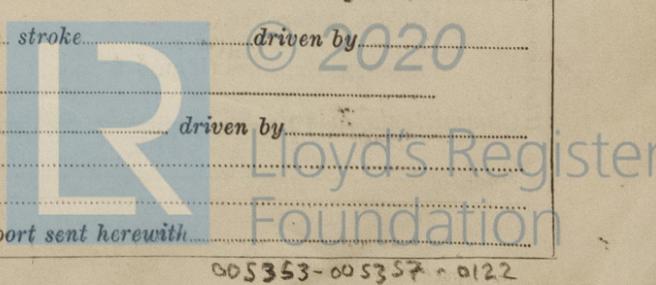
Are all Auxiliary Air Compressors, No. **None** No. of stages **-** diameters **-** stroke **-** driven by **-**

Is provision made for first charging the air receivers **Steam driven compressors**

Recharging Air Pumps, No. **see Newcastle** diameter **Report No. 107075** stroke **-** driven by **-**

Auxiliary Engines crank shafts, diameter **156** as per Rule **-** No **-** Position **-**

Have the auxiliary engines been constructed under special survey **-** Is a report sent herewith **-**



005353-005357-0122

AIR RECEIVERS:—Have they been made under survey... State No. of report or certificate...

Is each receiver, which can be isolated, fitted with a safety valve as per Rule... Report No. 107075

Injection Air Receivers, No... Cubic capacity of each... Internal diameter... thickness... Working pressure

Starting Air Receivers, No... Total cubic capacity... Internal diameter... thickness... Working pressure

IS A DONKEY BOILER FITTED Yes - 2 If so, is a report now forwarded Yes

PLANS. Are approved plans forwarded herewith for shafting No Receivers No Separate fuel tanks

Donkey boilers No General pumping arrangements Yes Pumping arrangements in machinery space Yes

Oil fuel burning arrangements Yes Have Torsional Vibration characteristics been approved

SPARE GEAR. Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied

The foregoing is a correct description of DOCK CO., LTD. Manufacturer.

ENGINE WORKS MANAGER 1950 Feb. 8, Mar. 13, 17, 24, 27, 28, 29, Apr. 4, 12, 13

Dates of Survey: During progress of work in shops, During erection on board vessel

Total No. of visits 54

Dates of examination of principal parts: Cylinders, Covers, Pistons, Rods, Connecting rods

Crank shaft, material, Identification mark, Flywheel shaft, material, Identification mark

Thrust shaft, material, Identification mark, Intermediate shafts, material, Identification marks

Tube shaft, material, Identification mark, Screw shaft, material, Identification mark

Identification marks on air receivers: Propeller 4059, Lloyds G.A.B. 12.4.49

Welded receivers, state Makers' Name: see Newcastle Report

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes

Description of fire extinguishing apparatus fitted: steam smothering

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with

Is this machinery duplicate of a previous case

General Remarks (State quality of workmanship, opinions as to class, &c. These engines and boilers have been

fitted aboard this vessel in accordance with the approved plans and rule requirements and on

completion the machinery was tried under working conditions and found satisfactory.

In my opinion this vessel is now eligible for a record of LMC. 7.50 and notation of TS. (GL)

The amount of Entry Fee ... £ 85 : 3/.

Special ... £ : : When applied for 17-8-50. 19

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

Committee's Minute

Assigned

FRI 1 SEP 1950

+ LMC 7.50 Oil Eng

C.L. 2DB 18016.



Feb. (in dup)

Vertical text on the right edge of the page, including 'pt. 4b.', 'REC', 'ate of 17', 'o. in IN', 'g. Booh', 'ilt at...', 'gines no', 'nkey B', 'ake Hor', 'N. Powe', 'ade for u', 'ENG', 'imum p', 'an Indio', 'm inner', 'NING', 'wheel da', 'unk', 'Se', 'aft, (A', 'NING', 'wheel S', 'be Shaft', 'nze Lin', 'peller bo', 'he liner', 'osive...', 'of tube s', 'peller,', 'ent of', 'hod of', 'ication.', 'gged wa', 'to the', 'e Pump', 'ps conn', 'e coolin', 'gement', 'st Pun', 'wo ind', 'pumps', 'lds, &c', 'penden', 'all the', 'sible m', 'll Sea', 'ently h', 'hey eac', 'pipes', 'pipes', 'll pipe', 'arrang', 'or fr', 'ood ve', 'Air C', 'ary A', 'Auxil', 'provis', 'aging', 'ary E', 'the au'