

REPORT ON OIL ENGINE MACHINERY

No. 19748.

Date of writing Report 6th Oct. 1952.

Received at London Office

When handed in at Local Office 20th Oct. 1952.

No. in Survey held at Middlesbrough.

Date, First Survey 8th June 1950.

MIDDLESBROUGH.

Last Survey 10th Sep. 1952.

Number of Visits 82.

Single
on the Twin
Triple
Quadruple

Screw vessel

m.v. "LUCERNA".

Tons

Gross 11292.46

Net

Built at South Bank.

By whom built Smith's Dock Co. Ltd.

Yard No. 1215. When built 1952.

Engines made at Newcastle on Tyne.

By whom made R. & W. Hawthorn Leslie & Co. Ltd.

Engine No. 4084. When made 1952.

Donkey Boilers made at West Hartlepool.

By whom made Central Marine Engine Works.

Boiler No. R. 418. When made 1952.

Brake Horse Power

Maximum 5500

Max. & Service

Owners H.E. Moss & Co's Tankers (Holdings) Ltd.

Port belonging to Liverpool.

M.N. as per Rule 1100

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted Yes

Trade for which vessel is intended

Open Sea Service. Tanker.

OIL ENGINES, &c. — Type of Engines

Maximum pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

Mean Indicated Pressure

way of a crank

Is there a bearing between each crank

Revolutions per minute

Maximum

Service

Span of bearings (i.e., distance between inner edges of bearings in

Flywheel dia.

Weight

Moment of inertia of flywheel (lbs. in² or Kg. cm.²)

Means of ignition

Kind of fuel used

Crank

Solid forged

Semi built

All built

dia. of journals

as per Rule

as fitted

Crank pin dia.

Crank webs

Mid. length breadth

Mid. length thickness

shrunk

Thickness parallel to axis

Thickness around eye-hole

Flywheel Shaft, diameter

as per Rule

as fitted

SEE NEWCASTLE REPORT No. 109240.

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the

tube

screw

shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per Rule

as fitted

Is the after end of the liner made watertight in the

propeller boss

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

Is an approved Oil Gland fitted at the after

end of stern tube

If so, state type

Length of bearing in Stern Bush next to and supporting propeller

Propeller, dia.

Pitch

No. of blades

Material

whether moveable

Total developed surface sq. feet

Moment of inertia of propeller including entrained water (lbs. in² or Kg. cm.²)

Kind of damper, if fitted

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine

Lubrication

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Means of

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

1-steam

1-steam

Cooling Water Pumps, No. and how driven

2-M.E. Driven

Working F.W. 2-M.E. driven.

W2-M.E. driven

12x12x12

sup. rotary

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. and capacity

None

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and capacity of each

2-8" x 9" x 10"

How driven

steam

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

allast Pumps, No. and capacity

1-8" x 9" x 10"

Power Driven Lubricating Oil Pumps, including spare pump, No. and size

2-M.E. Driven

Are two independent means arranged for circulating water through the Oil Cooler

Yes

Branch Bilge Suctions

No. and size:—In machinery spaces

3-3½" 3-2"

Cofferdam

Ford. 1-2½"

holds, &c.

1-7" Fore Peak, 1-3½" Aft Peak, 2-7" Deep tank 2-7" Cofferdam 2-2½" D.T. top 2-2½" store

Direct Bilge Suctions to the engine room bilges, No. and size

1-9" & 2-6"

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes

Yes

Are the bilge suction 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

efficiently 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

Do all pipes pass through the bunkers

None

How are they protected

Do all pipes pass through the deep tanks

Suction Pipe to Fore Peak

Have they been tested as per Rule

Yes

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

None

Is it fitted with a watertight door

worked from

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

In Air Compressors, No.

None

No. of stages

diameters

stroke

driven by

Auxiliary Air Compressors, No.

2. Reavell

No. of stages

Two

diameters

4½ & 10½

stroke

8"

driven by

steam (reader)

All Auxiliary Air Compressors, No.

No.

No. of stages

diameters

stroke

driven by

Is provision made for first charging the air receivers

Steam Driven Compressors

Suctioning Air Pumps or Blowers, No.

One

How driven

M.E. Crankshaft

Auxiliary Engines

Have they been made under survey

Engine Nos.

Makers name

See London Report No. 123700

Position of each in engine room

Report No.

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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....
State full details of safety devices.....
Can the internal surfaces of the receivers be examined and cleaned..... Is a drain fitted at the lowest part of each receiver.....
Injection Air Receivers, No..... Cubic capacity of each..... Internal diameter..... thickness.....
Seamless, welded or riveted longitudinal joint..... SEE NEWCASTLE REPORT No. 109240..... Material..... Range of tensile strength..... Working pressure.....
Starting Air Receivers, No..... Total cubic capacity..... Internal diameter..... thickness.....
Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

IS A DONKEY BOILER FITTED Yes -2 ✓ If so, is a report now forwarded..... Yes.....
Is the donkey boiler intended to be used for domestic purposes only..... No. ✓

PLANS. Are approved plans forwarded herewith for shafting..... No. ✓ Receivers..... No..... Separate fuel tanks..... Yes.....
(If not, state date of approval).....
Donkey boilers..... No. ✓ General pumping arrangements..... Yes..... Pumping arrangements in machinery space..... Yes.....
Oil fuel burning arrangements..... Yes

Have Torsional Vibration characteristics been approved..... See Newcastle Report No. 109240..... approval.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... Yes ✓ State if for "short voyages" only..... No. ✓
State the principal additional spare gear supplied..... Tail Shaft & Propeller. ✓

See also attached List of Spare Gear.

FOR SMITH'S DOCK CO., LTD.

The foregoing is a correct description, *A. Warley* Manufacturer.

Dates of Survey while building	During progress of work in shops - -	During erection on board vessel - -	Total No. of visits
	1950. June 8. Feb. 11. 27. 29. Mar. 4. 5. 7. 11. 12. 18. 19. 20. 21. 25. 27. Apr. 3. 4. 7. 8. 9. 10. 15. 17. 28. 29. May 2. 5. 6. 7. 9. 12. 15. 19. 20. 22. 23. 26. 27. 28. 30. June 4. 5. 9. 10. 11. 13. 16. 18. 19. 20. 23. 25. 26. 27. 30. July 3. 4. 8. 9. 14. 22. 24. 25. 28. 31. Aug. 15. 19. 20. 21. 22. 25. 27. 28. Sept. 2. 4. 5. 8. 9. 10.		82.

Dates of examination of principal parts—Cylinders - - Covers - - Pistons - - Rods - - Connecting rods - -
Crank shaft - - Flywheel shaft - - Thrust shaft - - Intermediate shafts - - Tube shaft - -
Screw shaft 7.3.52. Propeller 7.3.52. Stern tube 5.3.52 Engine seatings 12.5.52. Engine holding down bolts 12.5.52.
Completion of fitting sea connections 12.3.52. Completion of pumping arrangements 5.9.52. Engines tried under working conditions 8 & 10.9.
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..... SEE NEWCASTLE REPORT No. 109240. Screw shaft, material..... Identification mark.....

Identification marks on air receivers.....
" " " Propeller 3048 Lloyd's J.L.W. 20.7.51.

Welded receivers, state Makers' Name..... See Newcastle Report No. 109240.

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 ✓

Full description of fire extinguishing apparatus fitted in machinery spaces..... Steam smothering in Engine & Boiler Rooms. ✓

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo..... If so, have the requirements of the Rules been complied with.....

What is the special notation desired..... Not desired.

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with..... not desired.

Is this machinery duplicate of a previous case..... No. ✓ If so, state name of vessel.....

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

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 9.52 and Notation of TS(CL) 9.52.

Installation
The amount of Entry Fee ... £ 125 - - -
Special ... £ : :
Donkey Boiler Fee... £ : :
Travelling Expenses (if any) £ : :
When applied for 21.10. 19 52.
When received 19

Engineer Surveyor to Lloyd's Register of Shipping

(The Committee's Minute

Assigned + LMC 9.52 Oil Eng
CL 228180/b (with torsional endorsement)

TUES. 30 DEC 1952

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