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21 SEP 1947

# REPORT ON OIL ENGINE MACHINERY.

No. 226. & 9.

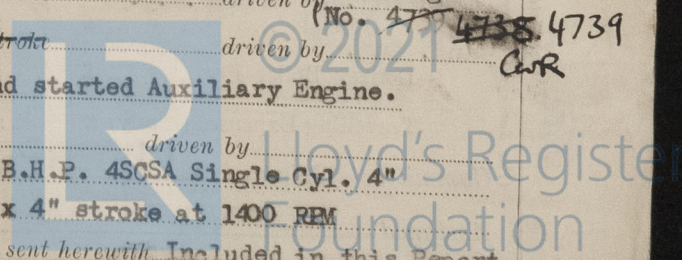
Received at London Office

20 SEP 1947

by Rules... of writing Report 18-9-1947 When handed in at Local Office 18-9-1947 Port of **LEEDS.**  
Actual... in Survey held at **Keighley** Date, First Survey **20-6-47** Last Survey **2-9-1947**  
by Rules... on the **Triple** Screw vessel **MV "MOEARA"** Number of Visits **4**  
Actual... **Quadruple** Tons { Gross... Net...  
Built at **Northwich** By whom built **Isaac Pimblott & Sons Ltd.** Yard No. **674** When built...  
e fuel tanks. 12 gins made at **Keighley** By whom made **H. Widdop & Co.** Engine No. **4749** When made **1947**  
s above... key Boilers made at **-** By whom made **-** Boiler No. **-** When made **-**  
ke Horse Power... Owners **Anglo-Saxon Petroleum Co. Ltd.** Port belonging to...  
m. Horse Power as per Rule... Is Refrigerating Machinery fitted for cargo purposes... Is Electric Light fitted...  
ade for which vessel is intended...

**ENGINES, &c.**—Type of Engines **Heavy Oil Engine** 2 or 4 stroke cycle **2** Single or double acting **Single**  
imum pressure in cylinders **70 lbs/sq.in.** Diameter of cylinders **8 1/2"** Length of stroke **12"** No. of cylinders **5** No. of cranks **5**  
an Indicated Pressure **55 lbs/sq.in.** of bearings, adjacent to the crank, measured from inner edge to inner edge **11 3/8"** Is there a bearing between each crank **Yes**  
an of bearings, adjacent to the crank, measured from inner edge to inner edge **11 3/8"** Is there a bearing between each crank **Yes**  
olutions per minute **400** Flywheel dia. **26"** Weight **7 1/2 cwt.** Means of ignition **Compression** Kind of fuel used **Diesel Oil**  
ink (Solid forged dia. of journals as per Rule **Approved** as fitted **4 3/4"** Crank pin dia. **4 3/4"** Crank webs Mid. length breadth **6 1/2"** Thickness parallel to axis **-**  
aft, **Semi built** dia. of journals as fitted **4 3/4"** Crank pin dia. **4 3/4"** Crank webs Mid. length thickness **2 3/8"** shrunk Thickness around eye hole **-**  
**Combined** as per Rule **-** as fitted **-** Thrust Shaft, diameter at collars as per Rule **3 3/8"**  
wheel Shaft, diameter as fitted **5"** Intermediate Shafts, diameter as fitted **-** as per Rule **-** as fitted **-**  
be Shaft, diameter as fitted **-** as per Rule **-** as fitted **-** as per Rule **-** as fitted **-**  
Screw Shaft, diameter as fitted **-** as per Rule **-** as fitted **-** as per Rule **-** as fitted **-**  
onze 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  
peller boss **-** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **-**  
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-  
rods **-** If two liners are fitted, is the shaft lapped or protected between the liners **-** Is an approved Oil Gland or other appliance fitted at the after  
aft **✓** of tube shaft **-** If so, state type **-** Length of bearing in Stern Bush next to and supporting propeller **19 1/2"**  
ots **11-12-6** peller, dia. **47"** Pitch **33 1/2"** No. of blades **3** Material **Bronze** whether moveable **Fixed** Total developed surface **5.55** sq. feet  
ons **3-3-6** Method of reversing Engines **Direct** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **Yes** Means of  
riation **Forced** Thickness of cylinder liners **11/16"** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled  
rks **✓** **Yes** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
D.B.W. 4-6 to the engine **One 3 1/4" D x 1 1/8" S.** Cooling Water Pumps, No. **-** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **-**  
ge Pumps worked from the Main Engines, No. **One** Diameter **3.75"** Stroke **1.875"** Can one be overhauled while the other is at work **-**  
mps connected to the Main Bilge Line { No. and size **General Service Pump (See below) and Main Engine.**  
How driven **Driven Pump (See above)**  
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  
angements...

H. Wag... self  
ster of Ship...  
ast Pumps, No. and size **See Aux. Below** Power Driven Lubricating Oil Pumps, including spare pump, No. and size **1-1 3/8" x 2 11/16"**  
e two independent means arranged for circulating water through the Oil Cooler **No** Suctions, connected to both main bilge pumps and auxiliary  
ge pumps, No. and size:—In machinery spaces **-** In pump room **-**  
holds, &c...  
ependent Power Pump Direct Suctions to the engine room bilges, No. and size **-**  
e all the bilge suction pipes in holds and tunnel well fitted with strum-boxes **-** Are the bilge suction in the machinery spaces led from easily  
ossible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **-**  
e all Sea Connections fitted direct on the skin of the Ship **-** Are they fitted with valves or cocks **-** Are they fixed  
iciently high on the ship's side to be seen without lifting the platform plates **-** Are the overboard discharges above or below the deep water line **-**  
e they each fitted with a discharge valve always accessible on the plating of the vessel **-** Are the blow off cocks fitted with a spigot and brass covering plate **-**  
at pipes pass through the bunks **-** How are they protected **-**  
at pipes pass through the deep tanks **-** Have they been tested as per Rule **-**  
e all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times **-**  
he 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  
ces, or from one compartment to another **-** Is the shaft tunnel watertight **-** Is it fitted with a watertight door **-** worked from **-**  
e 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. **One** No. of stages **One** diameters **3.5"** stroke **2.5"** driven by **Main Engines**  
iliary Air Compressors, No. **One** No. of stages **Two** diameters **6" x 2.75"** stroke **3"** driven by **Aux. Eng.**  
General Service Pump **Hamworthy Centrifugal Pump No. 7028** driven by **(No. 4738 4739)**  
at provision is made for first charging the air receivers **Auxiliary Air Compressor driven by hand started Auxiliary Engine.**  
enging Air Pumps, No. **Underside of pistons** diameter **-** stroke **-** driven by **-**  
iliary Engines crank shafts, diameter **2.21"** as per Rule **2.25"** as fitted **2.25"** No. **One 7 B.H.P. 4SCSA Single Cyl. 4"** Position **dia. x 4" stroke at 1400 RPM**  
e the auxiliary engines been constructed under special survey **Yes** Is a report sent herewith **Included in this Report.**





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

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.

Can the internal surfaces of the receivers be examined and cleaned. Yes Is a drain fitted at the lowest part of each receiver.

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

Seamless, lap welded or riveted longitudinal joint. Material Range of tensile strength Working pressure by Rules.

Starting Air Receivers, No. 2 Total cubic capacity 7.7 cu.ft. Internal diameter 9 3/4" thickness 5/16"

Seamless, lap welded or riveted longitudinal joint. Material O.H. Steel Range of tensile strength 28/32 Working pressure by Rules. Actual 350 lb

IS A DONKEY BOILER FITTED If so, is a report now forwarded.

Is the donkey boiler intended to be used for domestic purposes only.

PLANS. Are approved plans forwarded herewith for shafting. Receivers. Separate fuel tanks.

Donkey boilers. General pumping arrangements. Pumping arrangements in machinery space.

Oil fuel burning arrangements.

### SPARE GEAR.

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

State the principal additional spare gear supplied.

**PRO R. WIDDOP & COMPANY LTD.**

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 20-6-47, 16-7-47, 20-8-47, 2-9-47  
During erection on board vessel -  
Total No. of visits

Dates of examination of principal parts—Cylinders. 20-6-47 Covers. 20-6-47 Pistons 20-6-47 Rods - Connecting rods 20-6-47

Crank shaft 16-7-47 Flywheel shaft - Thrust shaft 20-6-47 Intermediate shafts - Tube shaft -

Screw shaft - Propeller - Stern tube - Engine seatings Engine holding down bolts.

Completion of fitting sea connections. Completion of pumping arrangements. Engines tried under working conditions.

Crank shaft, material O.H. Steel Identification mark LLOYD'S 280 18-9-46, TDS Flywheel shaft, material, Aux. Eng. ) LLOYD'S 339 WTM

Thrust shaft, material O.H. Steel Identification mark LLOYD'S 2566 20-6-47 D.R.W. Intermediate shafts, material - Crankshaft ) 12.11.40

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

Identification marks on air receivers.

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

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

Description of fire extinguishing apparatus fitted.

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.

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. If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c. The oil engine machinery covered by this Report has been constructed under special survey of tested materials, in accordance with the Secretary's letter, approved plan and the requirements of the Rules.

The materials and workmanship are good, and the machinery was found to be satisfactory when tested in the shop under full load conditions.

This machinery is suitable, in my opinion, for the purpose intended, and when satisfactorily installed and reported, would be eligible to receive the notation of L.M.C. (with date)

The amount of Entry Fee ... £ 13 : 6 : 8.  
Main Eng. 2/3 of £20.0.0.  
Special ... £ 4 : 0 : 0.  
Aux. Eng.  
Donkey Boiler Fee... £ : :  
Travelling Expenses (if any) £ 3 : 15 : 0.

When applied for 17-9-1947

When received 19

Engineer Surveyor to Lloyd's Register of Shipping



Lloyd's Register Foundation