

REPORT ON OIL ENGINE MACHINERY.

No. 30483

Date of writing Report

When handed in at Local Office

17 OCT. 1930

Port of *Sunderland*No. in
Reg. Book.Survey held at *Sunderland*Date, First Survey *14 Jan*Last Survey *13 Oct 1930*Number of Visits *69*Single
on the *Twin* **MOTOR**
Triple
Screw vessel*VIGDIS*Tons { Gross *6094*
Net *3624*Built at *Sunderland*By whom built *J. L. Thompson & Co. Ltd.*Yard No. *571* When built *1930*Engines made at *Do*By whom made *William Doxford & Co. Ltd.*Engine No. *179* When made *1930*Donkey Boilers made at *Lockhart & Co.*By whom made *Riley Bros.*Boiler No. *9991* When made *1930*Brake Horse Power *2390*Owners *Brunn Van Der Lippe*Port belonging to *Sunderland*Nom. Horse Power as per Rule *598*Is Refrigerating Machinery fitted for cargo purposes *No*Is Electric Light fitted *Yes*Trade for which vessel is intended *Oil Tanker**2276**85*OIL ENGINES, &c.—Type of Engines *2 Stroke Cycle Offshoot from 2 or 4 stroke cycle* Single or double acting *Single*Maximum pressure in cylinders *568* Diameter of cylinders *500=22* Length of stroke *2100=85* No. of cylinders *4* No. of cranks *4 x 3 throw*Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *980* Is there a bearing between each crank *YES*Revolutions per minute *95* Flywheel dia. *2352* Weight *5.6 TONS* Means of ignition *TEMP OF COMPRESSOR* Kind of fuel used *CRUDE OIL*Crank Shaft, dia. of journals *400* as per Rule *400* as fitted *APPROVED* Crank pin dia. *440* Crank Webs *245* Mid. length breadth *820* Thickness parallel to axis *245* Mid. length thickness *245* Thickness around eyehole *205*Flywheel Shaft, diameter *400* as per Rule *400* as fitted *APPROVED* Intermediate Shafts, diameter *380* as per Rule *380* as fitted *APPROVED* Thrust Shaft, diameter at collars *400* as per Rule *400* as fitted *APPROVED*Tube Shaft, diameter *400* as per Rule *400* as fitted *APPROVED* Screw Shaft, diameter *400* as per Rule *400* as fitted *APPROVED* Is the tube *YES* Is the screw *YES* shaft fitted with a continuous liner *YES*Bronze Liners, thickness in way of bushes *10* as per Rule *10* as fitted *APPROVED* Thickness between bushes *10* as per Rule *10* as fitted *APPROVED* Is the after end of the liner made watertight in thepropeller boss *YES* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *YES*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 *YES*If two liners are fitted, is the shaft lapped or protected between the liners *YES* Is an approved Oil Gland or other appliance fitted at the after end of the tubeshaft *NO* If so, state type *NO* Length of Bearing in Stern Bush next to and supporting propeller *5-6*Propeller, dia. *16-0* Pitch *13-0* No. of blades *4* Material *BRONZE* whether Moveable *NO* Total Developed Surface *85* sq. feetMethod of reversing Engines *COMPRESSED AIR* Is a governor or other arrangement fitted to prevent racing of the engine *YES* Means of lubrication*FORCED* Thickness of cylinder liners *REMARKS* Are the cylinders fitted with safety valves *YES* Are the exhaust pipes and silencers water cooled or lagged withnon-conducting material *LACER* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *FUNNEL EXHAUST*Cooling Water Pumps, No. *2- INDEPENDENT* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *FRESH WATER COOLING*Bilge Pumps worked from the Main Engines, No. *1- WORKING 1- STANDBY READY COUPLED* Diameter *1- BALLAST 200 TONS PER HR* Stroke *1- BILGE 45 TONS PER HR* Can one be overhauled while the other is at work *1- GENERAL SERVICE 45 TONS PER HR*Pumps connected to the Main Bilge Line { No. and Size *STEAM* How driven *ELECT. MOTOR*Ballast Pumps, No. and size *1- 200 TONS PR HR* Lubricating Oil Pumps, including Spare Pump, No. and size *2- 27 TONS PR HR*Are two independent means arranged for circulating water through the Oil Cooler *YES* Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces *4 2 3/2, 1 2 4, 1 2 8* In Pump Room *1 2 2 1/2, 2 2 3/4*In Holds, &c. *2 @ 2 1/2 FORE HOLD*Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1 @ 8" TO BALLAST PUMP*Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *YES* Are the Bilge Suctions in the Machinery Spacesled 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*What pipes pass through the bunkers *NONE* How are they protected *NO*What pipes pass through the deep tanks *NONE* 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 *YES* Is it fitted with a watertight door *YES* worked from *YES*

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

Main Air Compressors, No. *2* No. of stages *3* Diameters *14 9/16, 3 1/2* Stroke *6* Driven by *Steam*Auxiliary Air Compressors, No. *2* No. of stages *3* Diameters *9 1/8, 2 1/2* Stroke *6* Driven by *Electric*Small Auxiliary Air Compressors, No. *1* No. of stages *3* Diameters *18 1/2* Stroke *550* Driven by *Steam*Scavenging Air Pumps, No. *1* Diameter *18 1/2* Stroke *550* Driven by *Steam*Auxiliary Engines crank shafts, diameter *400* as per Rule *400* as fitted *APPROVED* Position *NO*AIR RECEIVERS:—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 and cleaned *YES* Is a drain fitted at the lowest part of each receiver *YES*High Pressure Air Receivers, No. *2* Cubic capacity of each *220 CF* Internal diameter *3-6* thickness *1*Seamless, lap welded or riveted longitudinal joint *RIVETED* Material *STEEL* Range of tensile strength *28/32* Working pressure *110 LBS.*Starting Air Receivers, No. *2* Total cubic capacity *220 CF* Internal diameter *3-6* thickness *1*Seamless, lap welded or riveted longitudinal joint *RIVETED* Material *STEEL* Range of tensile strength *28/32* Working pressure *110 LBS.*

002071-002078-0008

IS A DONKEY BOILER FITTED? **YES**

If so, is a report now forwarded? **YES.**

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

PLANS. Are approved plans forwarded herewith for Shafting **NO. MINISTER WEDEL** Receivers **DO** Separate Tanks **NO DO**
(If not, state date of approval)

Donkey Boilers **YES**

General Pumping Arrangements **YES**

Oil Fuel Burning Arrangements **NO DO.**

SPARE GEAR.

Has the spare gear required by the Rules been supplied **YES.**

State the principal additional spare gear supplied

1 piston rod with skirt & extra piston rings, 1 centre crosshead bearing, 1 centre bottom end-bearing, 1 side connecting rod bottom end bearing, 1 non return starting valve, 1 side valve for main cylinder, 4 seawater pump valve dies, 6 thrust plates, 1 Propeller shaft, 1 C. I. propeller, 1 set of valves for fuel transfer pump, 1 set of valves for bilge pump, 1 set of valves for boiler, oil fuel burning plant, and auxiliary machinery.

The foregoing is a correct description,

W. Keller

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1930. Jan. 14, 16, 27, 28, 29. Feb. 19, 20, 25. Mar. 10, 11, 12, 14, 20, 26, 27, 28, 31. Apr. 2, 7, 8, 10, 14, 15, 24, 25, 28, 29. May, 2, 5, 7, 13, 16, 22, 29, 30. June 6, 12, 17, 19. July 1, 3, 4, 8, 9, 11, 17, 21, 31. Aug. 5, 6, 12, 13, 14, 26, 27, 28, 29. Sep. 4, 5, 8, 11, 15, 16, 18, 19, 22. Oct. 2, 8, 13
During erection on board vessel - -
Total No. of visits **69**

Dates of Examination of principal parts—Cylinders **26/3/30** Jacket Covers **10/3/30** Pistons **25/2/30 to 10/4/30** Rods **12/3/30** Connecting rods **14/3/30**
Crank shaft **5/5/30** Flywheel shaft **8** Thrust shaft **7/4/30** Intermediate shafts **29/4/30** Tube shaft **19/9/30**
Screw shaft **28/4/30** Propeller **29/4/30** Stern tube **8/7/30** Engine seatings **6/8/30** Engines holding down bolts **19/9/30**
Completion of fitting sea connections **3/7/30** Completion of pumping arrangements **22/9/30** Engines tried under working conditions **13/10/30**
Crank shaft, Material **I. STEEL** Identification Mark **6525-D** Flywheel shaft, Material **8** Identification Mark **3539**
Thrust shaft, Material **I. STEEL** Identification Mark **3609** Intermediate shafts, Material **I. STEEL** Identification Marks **3539**
Tube shaft, Material **✓** Identification Mark **✓** Screw shaft, Material **I. STEEL** Identification Mark **SPARE 3481 WORKING 61**

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.**

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 **main engine only**

Is this machinery duplicate of a previous case **YES**

If so, state name of vessel **M.V. "MINISTER WEDEL"**

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been built under special survey & the materials & workmanship are good. On completion the machinery was tried under full working conditions with satisfactory results. The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the record LMC-10-30 marked in the Society's Register Book.*

The Donkey boiler are also fitted to burn oil fuel F.P. above 150° F & the requirements of the Rules (Section 20) fully complied with.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10.30.

Oil Engines 25C.S.A. 4cy 22 1/2" - 85" C-L N.H.P. 598
2 D.B. 150 lb.

The amount of Entry Fee .. £ **6-0-0** When applied for, **8 Oct 1930**

Special £ **104-18-0**

Donkey Boiler Fee £ **4-4-0** When received, **13 Oct 1930**

Travelling Expenses (if any) .. £ **4-4-0**

Committee's Minute **TUE. 28 OCT 1930**

Assigned **+ L.M.C. 10.30**

Oil Eng. **2 D.B. 150 lb.**

CERTIFICATE WRITTEN



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