

REPORT ON OIL ENGINE MACHINERY.

Received at London Office

OCT 1930

Date of writing Report 17 OCT. 1930 When handed in at Local Office Port of Sunderland.
No. in Survey held at Sunderland Date, First Survey 14 Jan Last Survey 13 Oct 1930
Reg. Book. Number of Visits 69

on the **MOTOR** "VIGDIS" Single Screw vessel Tons Gross 6094 Net 3624
Built at Sunderland By whom built J.L. Thompson & Sons Ltd Yard No. 571 When built 1930.
Engines made at Do By whom made William Douglas & Sons Engine No. 179 When made 1930.
Donkey Boilers made at Sockthorpe By whom made Riley Bros Boiler No. 9991 When made 1930.
Brake Horse Power 2390 Owners Brunen Van Der Lippe Port belonging to Jansberg
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. 22 1/2 85

OIL ENGINES, &c.—Type of Engines 2 Stroke Cycle of Horizontal piston 2 or 4 stroke cycle Single or double acting Single
Maximum pressure in cylinders 568 LBS/DIAMETER Diameter of cylinders 500=22 Length of stroke 2160=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. 235 1/2 Weight 5.6 TONS Means of ignition COMPRESSION Kind of fuel used CRUDE OIL.
Crank Shaft, dia. of journals as per Rule 400 APPROVED Crank pin dia. 440 Crank Webs Mid. length breadth 820 Thickness parallel to axis 245
Flywheel Shaft, diameter as per Rule 400 APPROVED Intermediate Shafts, diameter as per Rule 380 APPROVED Thrust Shaft, diameter at collars as per Rule 400 APPROVED
Tube Shaft, diameter as per Rule 400 APPROVED Screw Shaft, diameter as per Rule 400 APPROVED Is the tube shaft fitted with a continuous liner YES
Bronze Liners, thickness in way of bushes as per Rule 10 APPROVED Thickness between bushes as per Rule Is the after end of the liner made watertight in the propeller boss YES 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 or other appliance fitted at the after end of the tube shaft No If so, state type 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. feet
Method of reversing Engines COMPRESSED AIR Is a governor or other arrangement fitted to prevent racing of the engine when disengaged YES Means of lubrication FORCED Thickness of cylinder liners REMARKED Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with non-conducting material LAGGED 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 FRESH WATER COOLING.

Cooling Water Pumps, No. 2 INDEPENDENT Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Bilge Pumps worked from the Main Engines, No. 1 WORKING 1 STANDBY READY COUPLED Diameter Stroke Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line No. and Size 1-BALLAST 200 TONS PER HR, 1-BILGE 45 TONS PER HR, 1-GENERAL SERVICE 45 TONS PER HR. How driven STEAM 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, 1 WORKING 1 SPARE READY COUPLED
Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 4 3/2", 1 1/4", 1 1/8" In Pump Room 1 1/2" 2 1/2" 2 3/4" 3" 4" 5" 6" 8"

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 Are the Bilge Suctions 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.
What pipes pass through the bunkers NONE How are they protected
What 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
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 2 Diameters 14 3/8" 12 1/2" Stroke 6" Driven by Steam
Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 9 1/2" 8 1/2" Stroke 6" Driven by Electric
Small Auxiliary Air Compressors, No. 1 No. of stages 1 Diameter 18 1/4" Stroke 550" Driven by Steam on eng.
Scavenging Air Pumps, No. 1 Diameter 18 1/4" Stroke 550" Driven by Steam on eng.
Auxiliary Engines crank shafts, diameter as per Rule as fitted Position

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 Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual 2020
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 by Rules Actual 110 LBS.



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 **NO**
(If not, state date of approval)

Separate Tanks **NO**

Donkey Boilers **YES**

General Pumping Arrangements **YES**

Oil Fuel Burning Arrangements **NO**

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 main 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,

WILLIAM DOXFORD & SONS, Limited

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. Total No. of visits **69**

Dates of Examination of principal parts - Cylinders **26/3/30** JACKET **25/2/30** Pistons **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 **4**
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
Thrust shaft, Material **I. STEEL** Identification Mark **3609** Intermediate shafts, Material **I. STEEL** Identification Marks **3539**
Tube shaft, Material **4** Identification Mark **4** Screw shaft, Material **I. STEEL** Identification Mark **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 L.M.C. 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. C-L**

Oil Engines **25C.S.A. 4CY 22 1/2" - 85" N.H.P. 598**
2DB. 150 lb.

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

Special £ **104-18-0**

Donkey Boiler Fee £

Travelling Expenses (if any) £ **4-4-0** 13 Oct. 1930 **frun. ✓**

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

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

Oil Eng. 2DB. 150 lb.

CERTIFICATE WRITTEN



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SUNDERLAND

Certificate (if required) to be sent to

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