

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

14 MAR 1931

No. 50970

-5 NOV 1930

Received at London Office

Date of writing Report 29-10-1930 When handed in at Local Office 30-10-1930 Port of GLASGOW.

No. in Survey held at Glasgow Date, First Survey 8-1-30 Last Survey 29-10-1930.
Reg. Book. "MIDDRECHT" Number of Visits 49

on the Single Screw vessel "MIDDRECHT" Tons ^{Gross} 5916 _{Net}

Built at Rotterdam By whom built Rotterdam Drydock Co. Yard No. 172 When built 1930.

Engines made at Glasgow By whom made Harlands & Wolff Ltd. Engine No. 4265 When made 1930.

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 2750 Owners Stoomvaart "De Maas" Port belonging to Rotterdam

Nom. Horse Power as per Rule 652 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended Carrying Oil in Bulk.

OIL ENGINES, &c.—Type of Engines Diesel, vertical 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 500 lbs./in.² Diameter of cylinders 740 mm. Length of stroke 1500 mm. No. of cylinders 8 No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1004 mm. Is there a bearing between each crank Yes

Revolutions per minute 100 Flywheel dia. 2489 mm. Weight 2.5 Tons Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 481 mm. Crank pin dia. 495 mm. Crank Webs Mid. length breadth 801 mm. Thickness parallel to axis 310 mm.
as fitted 495 mm. M. d. length thickness 310 mm. shrunk Thickness around eyehole 209 mm.

Flywheel Shaft, diameter as per Rule 481 mm. Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted 495 mm. as fitted as fitted

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the shaft fitted with a continuous liner
as fitted as fitted tube screw

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

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 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

Method of reversing Engines Compressed Air Is a governor or other arrangement fitted to prevent racing of the engine when debrided Yes Means of lubrication

Thickness of cylinder liners 53 & 32 mm. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or 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

Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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 { No. and Size How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces

In Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

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

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fixed sufficiently 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

Are 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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks 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

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 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. One No. of stages Three Diameters 750, 675 & 150 mm. Stroke 610 mm. Driven by Main Engine.

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined What means are provided for examining their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure Air Receivers, No. Two Cubic capacity of each 400 litres Internal diameter 492 mm. thickness 20 mm.

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 83000 lb./in.² Working pressure by Rules 1190 lb./in.²

Starting Air Receivers, No. 2 Total cubic capacity Internal diameter thickness

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

IS A DONKEY BOILER FITTED? _____

If so, is a report now forwarded? _____

PLANS. Are approved plans forwarded herewith for Shafting Crank shaft 15-10-29 Receivers _____

Separate Tanks _____

Donkey Boilers _____

General Pumping Arrangements _____

Oil Fuel Burning Arrangements _____

SPARE GEAR _____

As per attached lists — In accordance with the Society's Requirements and in excess.

The foregoing is a correct description,
FOR HARLAND AND WOLFE, LIMITED.

Archibald Paterson

Acting Finnieston Secretary

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1930 Jan 8. 17. 23. 29 Feb 3 Mar 3. 10 Apr 9. 10 May 2 30 June 6. 9. 10. 11. 12 20. 25. 26
{ During erection on board vessel - - - } July 2. 3. 9. 10. 11. 14. 29. 30 Aug 1. 5. 8. 11. 20. 18. 29 Sep 3. 5. 8. 10. 11. 18. 24 Oct 1. 3. 8. 15. 17. 21
Total No. of visits 49

Dates of Examination of principal parts—Cylinders 24-9-30 Covers 5-9-30 Pistons 22-8-30 Rods 22-8-30 Connecting rods 10-9-30

Crank shaft 10-6-30 Flywheel shaft *to crank* Thrust shaft _____ Intermediate shafts _____ Tube shaft _____

Screw shaft _____ Propeller _____ Stern tube _____ Engine seatings _____ Engines holding down bolts _____

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

Crank shaft, Material *Steel* Identification Mark *no 6265 50-6-30 T.D.B.* Flywheel shaft, Material *Steel* Identification Mark *to crank*

Thrust shaft, Material _____ Identification Mark _____ Intermediate shafts, Material _____ Identification Marks _____

Tube shaft, Material _____ Identification Mark _____ Screw shaft, Material _____ Identification Mark _____

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 _____

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 _____

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *M.V. "Moordrecht."*

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines (up to crank shaft coupling) have been built under special survey in accordance with the Society's Rules. The materials & workmanship are good. They have been run on the test bed with satisfactory results.*

*On completion of fitting out at Rotterdam and the carrying out of satisfactory trials this Machinery will be eligible, in my opinion, to be classed in the Register Book with record: * L.M.C. (with date): Oil Engines.*

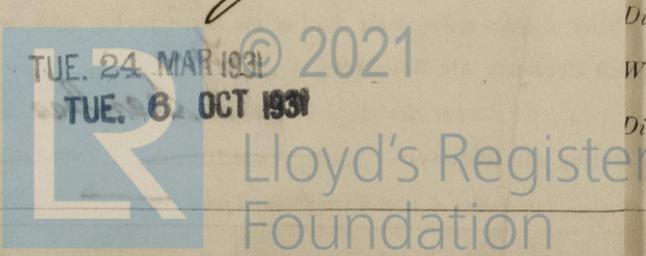
The amount of Entry Fee ... £ 6 : - :
Special ... £ 86 : 2/- :
Donkey Boiler Fee ... £ - : - :
Travelling Expenses (if any) £ - : - :

When applied for. 0261 1930
When received. 21. 11. 31

J. D. Boyle
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 4 - NOV 1930

Assigned *Deferred.*



Certificate (if required) to be sent to _____
(The Surveyors are requested not to write on or below the space for Committee's Minute.)