

# REPORT ON OIL ENGINE MACHINERY.

No. 1886.

10 MAR 1937

Received at London Office

Date of writing Report 15th Feb. 1937 When handed in at Local Office 5. 3. 1937 Port of Bremen  
 Date, First Survey June 8th, 1936 Last Survey Feb. 15th 1937  
 Number of Visits 117

Survey held at Bremerhaven  
 on the Single Screw vessel  
 Tons <sup>Gross</sup> 181 <sub>Net</sub>

Built at Bremerhaven By whom built Messrs. Deutsche Werft A.G. Yard No. 187 When built 1936/37  
 Engines made at Bremerhaven By whom made Messrs. M. A. M. Engine No. 687730/140 When made 1936/37  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_

Brake Horse Power 2 x 3600 Owners Texas Oil Comp. Port belonging to \_\_\_\_\_  
 Indicated Horse Power as per Rule 2 x 585 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted yes

Intended for which vessel is intended 1170 20 1/2 35 7/16

**ENGINES, &c.**—Type of Engines 2 x 982 52/190 2 or 4 stroke cycle 2 Single or double acting single  
 Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 520 Length of stroke 900 No. of cylinders 2 x 8 No. of cranks 8 each  
 Indicated Pressure 5.5 kg/cm<sup>2</sup>

Distance between bearings, adjacent to the Crank, measured from inner edge to inner edge 680 mm Is there a bearing between each crank yes  
 Revolutions per minute 170 Flywheel dia. 1932 Weight 980 kg Means of ignition dis. ign. Kind of fuel used diesel oil on foot

Crank Shaft, dia. of journals 150 as per Rule 350 as fitted 350 Crank pin dia. 350 Crank Webs Mid. length breadth 520 Thickness parallel to axis —  
 Mid. length thickness 160 Thickness around eyehole —

Propeller Shaft, diameter — as per Rule — as fitted — Intermediate Shafts, diameter — as per Rule — as fitted — Thrust Shaft, diameter at collars — as per Rule — as fitted —  
 Screw Shaft, diameter — as per Rule — as fitted — Is the { tube } shaft fitted with a continuous tinier { — }

Liner 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 —  
 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 —  
 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 dis. by comp. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication —  
 Thickness of cylinder liners 49 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with —  
 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 —

Bilge 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. — Diameter — Stroke — Can one be overhauled while the other is at work —

Bilge Pumps connected to the Main Bilge Line { No. and Size — How driven — }  
 Is cooling water led to the bilges — If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping —

Bilge Pumps, No. and size — Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 each, 90 m<sup>3</sup>/hr. at 415  
 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 Pump Room —

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 —  
 Are they 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 —

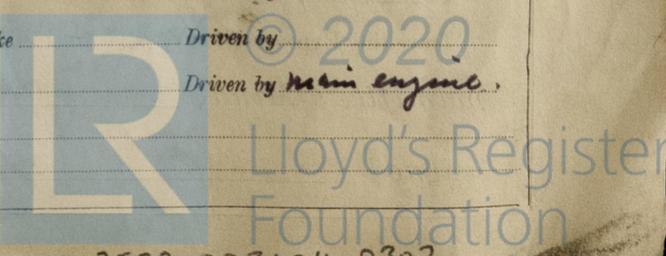
Are all pipes pass through the bunkers — How are they protected —  
 Are all pipes pass through the deep tanks — Have they been tested as per Rule —

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 —

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

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

Ventilating Air Pumps, No. 2 each engine, rotary Diameter 350 m<sup>3</sup>/Min Stroke 735 Driven by main engine  
 Auxiliary Engines crank shafts, diameter — as per Rule — as fitted — No. — Position —



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 and cleaned. Is a drain fitted at the lowest part of each receiver

High Pressure 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 Actual

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

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

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 18.3.36/2.4.36. 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 as per Rules.

The foregoing is a correct description, Maschinenfabrik Augsburg-Nürnberg A.-G.

Manufacturer.

1936. June 8, July 27, Aug. 14, 15, 29, 31, Sep. 2, 4, 7, 10, 11, 12, 14, 18, 22, 23, 25, 30 Oct. 1, 2, 3, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 30, 31. Nov. 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30. Dec. 2, 3, 4, 5, 7, 8, 9, 10, 15, 16, 17, 18, 19, 21, 22, 23, 24, 28, 30. Jan. 4, 5, 6, 7, 8, 13, 15, 16, 18, 19, 20, 28, 29, 30. Feb. 1, 2, 3, 4, 5, 9, 11, 12, 13, 15. Total No. of visits 117.

Dates of Examination of principal parts—Cylinders 17.11/2.12/3.2. Covers 30.10.36. Pistons 10/23. 11.36 Rods - Connecting rods 22.10/19.11.

Crank shaft 3.9/27.10.36 Flywheel shaft 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 S. M. Steel Identification Mark K.H. 16460 3.9.36 Flywheel shaft, Material Identification Mark H.B. 12609 27.10.36

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.

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

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 yes If so, state name of vessel Yard 164 Deutsche Werft A.G. (Haf. 200 mm stroke).

General Remarks (State quality of workmanship, opinions as to class, &c. These heavy oil main engines have been constructed

under special survey in accordance with the Soc. Rules and Regulations, as well as with the approved

plans and instructions thereto. The material used in the construction is good and the workman-

ship is satisfactory. The two engines have been tested on the makers test bed during 24 hours running

under full load and 10% overload, and part. loads, in the presence of the undersigned and were found to

be in safe working conditions during these trials. After the trials the engines have been opened out for

inspection and all parts were found in order.

In our opinion the vessel for which these engines are intended will be eligible for notation of

+L.M.C. (with date) when the whole machinery has been fitted satisfactorily on board and

tried under full working conditions.

The amount of Entry Fee 4/5 96.00 Special ... 4/5 2068.00 Donkey Boiler Fee 168.00 2 x Test bed Trial Travelling Expenses (if any) 68.00

When applied for, 8.3.1934 When received, 3.4.37

McCluskey, Peterson Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FEB 7 MAY 1937

Assigned See Ham. 76 22302

