

REPORT ON OIL ENGINE MACHINERY.

No. 2024.

JUL 11 1938.

MAY 21 1938

Received at London Office

Date of writing Report 10th. 5. 1938 When handed in at Local Office 17. 5. 1938

Port of Bremen Date, First Survey 25th Dec. 37 Last Survey 5th May 1938 Number of Visits 12

No. in Survey held at 104. 5. 1938

Tons { Gross Net

Reg. Book. Single on the Twin Triple Screw vessel

"GOLDFINDER"

Built at Hamburg-Kilholmsby By whom built Messrs. G. Reuck

Yard No. 636 When built 1938

Engines made at Mannheim By whom made Messrs. Motorenwerke Mannheim A.G.

Engine No. 39474/51728 When made 1938

Donkey Boilers made at Mannheim By whom made

Boiler No. - When made -

Brake Horse Power 250 Owners Mr. J. E. Humphrey, London

Port belonging to - Is Electric Light fitted -

Nom. Horse Power as per Rule 64 Is Refrigerating Machinery fitted for cargo purposes

Trade for which vessel is intended R/R 135 ft. 2 or 4 stroke cycle 4/ Single or double acting single

OIL ENGINES, &c. Type of Engines

Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 230 mm Length of stroke 350 mm No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 6.65 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 267 mm

Revolutions per minute 350 Flywheel dia. 880 mm Weight 780 kg Means of ignition Dis. ign. Kind of fuel used Gas oil on test bed

Crank Shaft, Solid forged dia. of journals as per Rule 150 mm Crank pin dia. 150 mm Crank Webs Mid. length breadth 210 mm Thickness parallel to axis shrunk Thickness around eye-hole 70 mm

Flywheel 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

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

Bronze 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 propeller boss

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 sq. feet

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface Means of lubrication

Method of reversing Engines by hand Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes

Thickness of cylinder liners 13 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material covered

Cooling Water Pumps, No. 1; 7.8 m³/h 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 Diameter 85 mm Stroke 65 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size How driven

Is the 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 arrangements

Ballast Pumps, No. and size Main engine Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1; 3.1 m³/h

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

In Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Are the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are they fitted with Valves or Cocks

Are all Sea Connections fitted direct on the skin of the ship Are the Overboard Discharges above or below the deep water line

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Blow Off Cocks fitted with a spigot and brass covering plate

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel How are they protected

What pipes pass through the bunkers Have they been tested as per Rule

What pipes pass through the deep tanks

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

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. No. of stages Diameters Stroke Driven by

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

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

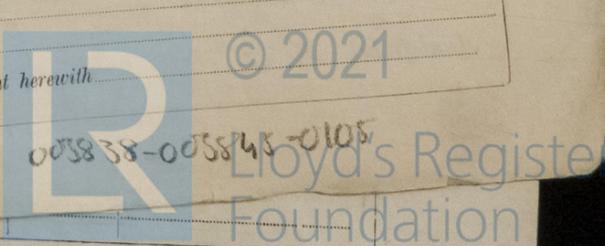
What provision is made for first Charging the Air Receivers

Scavenging Air Pumps, No. Diameter Stroke No. Position

Auxiliary Engines crank shafts, diameter as per Rule as fitted Journals 65 pins 70 mm Is a report sent herewith

Have the Auxiliary Engines been constructed under special survey yes

B.S.B. 30.6.38



01062 1/2

AIR RECEIVERS:—Have they been made under survey *yes* Are reports or certificates now forwarded *Certificates attached*
 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*

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 *2 x 250 lbs* Internal diameter *377 mm* thickness *6.5 mm*
 Seamless, lap welded or riveted longitudinal joint *seamless* Material *S.M. steel* Range of tensile strength *51.6/56.2* Working pressure *by Rules 32.86 atm.*
 Actual *30 atm.*

IS A DONKEY BOILER FITTED?
 Is the donkey boiler intended to be used for domestic purposes only *no* If so, is a report now forwarded? *no*

PLANS. Are approved plans forwarded herewith for Shafting *4th October 1937* Receivers *24th Aug. 37.* Separate Fuel Tanks _____
 (If not, state date of approval) *6th Nov. 37.*
 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.*

Identification Marks on Air Receivers. 1113
Lloyd's Test (Gen. Lloyd)
854 lbs *90* *No 104550*
H.P. 427 lbs *60 atm* *Please see London*
H.K. 12-2-38. *H.P. 30 atm* *letter of the*
H.P. 5-5-38. *H.P. 5-5-38.* *24th April 1938)*

The foregoing is a correct description,
MOTOREN-WERKE MANNHEIM A.G.
VORM. BENZ ABT. STAT. MOTORENB AU
Mannheim Manufacturer.

Dates of Survey while building
 During progress of work in shops -- *1937 Nov. 25; 1938 Jan. 21, 27; March 8, 25, 29, 30; April 5, 23; May 3, 4, 5.*
 During erection on board vessel --
 Total No. of visits *12*

Dates of Examination of principal parts—Cylinders *29.3.38* Covers *25.3.38* Pistons *4.5.38* Rods _____ Connecting rods *4.5.38*
 Crank shaft *25.3.38* Flywheel shaft _____ Thrust shaft _____ Intermediate shafts _____ Tube shaft _____
 Screw shaft _____ Propeller _____ Stern tube _____ Engine sealings _____ 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 *H.P. 118. 25-2-38* Flywheel shaft, Material _____ Identification Mark _____
 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 *Standard* type of makers _____

General Remarks (State quality of workmanship, opinions as to class, &c.)
This heavy oil main engine, and the aux. engines set have been constructed under special survey in accordance with the Soc. Rules and Regulations, as well as with the approved plans, the Secretary's letters, and instructions thereto. The material used in the construction is good and the workmanship satisfactory.
The engines have been tested on the makers' test bed for several hours running under full load, 10% overload and part. loads in the presence of the undersigned, and were found to work satisfactorily during these trials.
In our opinion the vessel for which these engines are intended, will be eligible for the notation of + U.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 Rs. 32.00*
 Special *4/6 Rs. 256.00*
 1x bed for machinery *63.00*
 1x Donkey Boiler Fee *21.00*
 1x test and rec. *10.00*
 Travelling Expenses (if any) £ *205.00*

When applied for, *20.5.1938*
 When received, *23.6.1938*

McMurrer W. Petersen.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 15 JUL 1938**

Assigned *See Sam 22829*



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