

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 274

JUL -7 1938

Comm. 684702

Received at London Office

Date of writing Report 30. 6. 1938 When handed in at Local Office 6.7. 1938 Port of Düsseldorf

No. in Survey held at Cologne Date, First Survey 14.10.1937. Last Survey 28.6. 1938
Reg. Book. Number of Visits 14Single
on the Twin } Screw vessel
Triple }
Quadruple }Tons { Gross
Net

Built at HongKong By whom built W.S. Bailey & Co. Yard No. 292 When built 1938

Engines made at Cologne By whom made Humboldt-Deutzmotoren A.G. Engine No. 480754/59 When made 1938

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

Brake Horse Power 575 Owners Port belonging to

Nom. Horse Power as per Rule 124 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Heavy Oil Engine RVMS 258 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 45 kg/cm² 14 7/16 Diameter of cylinders 370 mm Length of stroke 580 mm No. of cylinders 6 No. of cranks 6Mean Indicated Pressure 6.6 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 491.5 mm Is there a bearing between each crank yes

Revolutions per minute 250 Flywheel dia. 1400 mm Weight 3390 kg Means of ignition sol. inject Kind of fuel used on test bed gas oil

Crank Shaft, { Solid forged as per Rule 219.4 Crank pin dia. 220 mm Crank Webs Mid. length breadth 340 mm Thickness parallel to axis
Semi built dia. of journals as fitted 220 mm Mid. length thickness 115 mm shrunk Thickness around eyehole
All builtFlywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 140 Thrust Shaft, diameter at collars as per Rule 147
as fitted as fitted as fitted 180 mmTube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the { tube { shaft fitted with a continuous liner {
as fitted as fitted as fitted screwBronze 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
as fitted as fitted as fitted

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

Propeller, dia. Pitch directly No. of blades Material whether Moveable Total Developed Surface sq. feet

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

forced Thickness of cylinder liners 31 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material water cooled 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. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. one Diameter 130 mm Stroke 120 mm Can be overhauled while engine is at work yes

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 Main Engine Capacity 57 lts/min

Ballast Pumps, No. and size at 375 rev. per min. 1 tooth wheel pump

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 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. No. of stages Diameters 150 Stroke Driven by

Auxiliary Air Compressors, No. one No. of stages two Diameters 65/110 mm Stroke 120 mm Driven by main engine

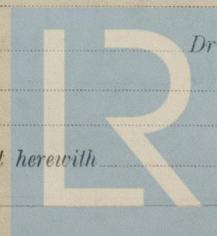
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

What provision is made for first Charging the Air Receivers

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule No.
as fitted Position

Have the Auxiliary Engines been constructed under special survey Is a report sent herewith



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AIR RECEIVERS:—Have they been made under survey yes Are reports or certificates now forwarded attached to the of this report to the Hongkong Office
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 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 Actual
Starting Air Receivers, No. four Total cubic capacity 4 x 500 lts. Internal diameter 450 mm thickness 12 mm
Seamless, lap welded or riveted longitudinal joint lap welded Material S.M. Steel Range of tensile strength 38-44 Working pressure by Rules Actual 30 kg/cm²

IS A DONKEY BOILER FITTED?

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

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting 187015 3.12.37 Receivers GO 244 21.7.32 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

Identification marks of air receivers:

No. 1069 & 1066

No. 1501 & 1506

LLOYD'S TEST

LLOYD'S TEST

W.P. 60 atm

W.P. 60 atm.

W.P. 30 atm

W.P. 30 atm.

H.K. 28.1.38.

V.S. 5. 3. 38.

The foregoing is a correct description,

Humboldt-Deutzmotoren

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 14.10.37.
During erection on board vessel -- 28.1., 5.3., 31.3., 6.5., 9.5., 10.5., 11.5., 16.5., 27.5., 2.6., 24.6., 27.6. and 28.6.1938
Total No. of visits

Dates of Examination of principal parts—Cylinders 9/5, 10/5, 28/6
Crank shaft 31/3, 2/6, Flywheel shaft 28/6
Screw shaft 28/6, Propeller 14.10.37. Thrust shaft 14.10.37. Intermediate shafts 28/6
Stern tube 28/6
Engine seatings 22/4, 28/6
Engines holding down bolts 28/6

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions on test bed 24.6.38
Crank shaft, Material S.M. Steel Identification Mark LLOYD'S H.K. 28.1.38 Flywheel shaft, Material Identification Mark
Thrust shaft, Material S.M. Steel Identification Mark LLOYD'S 31.3.38 J.L. Intermediate shafts, Material Identification Marks
Tube shaft, Material Identification Mark 14.10.37. 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 W.S. Bailey & Co., Hongkong, Yard No. 232
General Remarks (State quality of workmanship, opinions as to class, &c.)

This heavy oil engine has been constructed under special survey in accordance with the Society's Rules and Regulations as well/in accordance with the approved plans and instructions thereto. The material used in the construction is good and the workmanship is satisfactory. The engine has tested on the Makers' test bed in the presence of the undersigned during 10 hours consecutively running under full load and 10 % overload and was found to be safe working condition during these trials. After the trials all working parts of the engine have been opened out for inspection and were found in good condition. In my opinion the vessel for which this engine is intended will be eligible for the notation + L.M.C. (with date) when the whole machinery has been fitted satisfactorily on board and tried under full working condition. A copy of this report has been forwarded to the Hongkong Office.

The amount of Entry Fee .. 77: 60.- When applied for, Diseldorf 12/11/509
Special 77: 60.- 6.7.1938
Donkey Boiler Fee : : When received, 1/8.8.1938
Travelling Expenses (if any) 77: 60.- 1/8.8.1938

Committee's Minute

WEC 12 APR 1939

Assigned

See H.K. J.E. 8301

Engineer Surveyor to Lloyd's Register of Shipping.



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