

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 278

Received at London Office

JUL 25 1938

omm. 684731.

Date of writing Report 11.7. 1938 When handed in at Local Office 18.7. 1938 Port of Dusseldorf
No. in Survey held at Cologne Date, First Survey 6.12.37. Last Survey 11.7.38 19
Reg. Book. Number of Visits 12

on the Single }
Twin } Screw
Triple }
Quadruple }
Built at Waterhuizen By whom built S. Pattje Yard No. 173 When built 1938
Engines made at Cologne By whom made Humboldt-Deutzmotoren A.G. Engine No. 491020/26 When made 1938
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 350 Owners Port belonging to
Nom. Horse Power as per Rule 81,5 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 RV7M 345 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders 7 No. of cranks 7
Mean Indicated Pressure 6,6 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 307,5 mm Is there a bearing between each crank yes
Revolutions per minute 300 Flywheel dia. 1250 mm Weight 2600 kg Means of ignition sol. inject Kind of fuel used on test bed gas oil
Crank Shaft, { Solid forged as per Rule
Semi built dia. of journals as fitted 190 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 339 mm Thickness parallel to axis
All built as fitted 70 mm Thickness around eyehole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 190 mm Thrust Shaft, diameter at collars as per Rule
as fitted as fitted as fitted
Tube 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

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
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 No. of blades Material whether Moveable Total Developed Surface sq. feet
directly by hand Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

Method of reversing Engines forced Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
water cooled 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. 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 100 mm Stroke 85 mm Can one be overhauled while the other 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 capacity 80 ltrs/min. at 1400 r.p.m.

Ballast Pumps, No. and size Driven Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 tooth wheel pump
(two stages)
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. one No. of stages two Diameters 145/60 mm Stroke 85 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
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. Position
as fitted

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

AIR RECEIVERS:—Have they been made under survey

Are reports or certificates now forwarded attached to the of this report sent to the

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

Starting Air Receivers, No.

two

Total cubic capacity 2x500 ltrs.

Internal diameter 450mm

thickness 12mm

Seamless, lap welded or riveted longitudinal joint

lapwelded

Material S.M.Steel

Range of tensile strength 38-44 kg/mm²

Working pressure by Rules

Actual 30 kg/cm²

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

212503 25.2.35

Receivers G.O. 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 on air receivers

Nos. 1497 and 1503

LLOYD'S TEST

60 Atm.

W.P. 30 Atm.

V.S. 5.3.38.

The foregoing is a correct description,

Humboldt-Deutzmotoren

Aktiengesellschaft

Manufacturer.

Dates of Survey while building
During progress of work in shops - 6.12.37 - 5.3. - 6.5. - 11.5. - 24.5. - 17.6. - 21.6. - 22.6. - 24.6. - 25.6. - 9.7. -
During erection on board vessel - 11.7.38.
Total No. of visits

Dates of Examination of principal parts—Cylinders 21.6. - 22.6. - Covers 22.6. - 11.7. - Pistons 11.7. - Rods 11.5. - 24. - 11.7. - Connecting rods 11.7. -
Crank shaft 6.12. - 25.6. - 11.7. - Flywheel shaft Thrust shaft Intermediate shafts 6.5. 11.7. 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 9.7.38 on
Crank shaft, Material S.M.Steel Identification Mark 12824 J.L. Flywheel shaft, Material Identification Mark Lloyd's
Thrust shaft, Material Identification Mark 6.12.37. Intermediate shafts, Material S.M.Steel Identification Marks 3372 H.B.11
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 Messrs. Howthorn Leslie & Co. Yard No. 100 Düsseldorf Report 100

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 as in accordance with the approved plan and instructions thereto.

The material used in the construction is good and the workmanship is satisfactory. The engine has been tested on the Maker's test bed in the presence of the undersigned during 10 hours consecutive 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 sent to Rotterdam Office.

The amount of Entry Fee .. \$ 75 : 40. - When applied for, 21.7.1938

Special ... \$ 75 : 40. - When received, 24.8.1938

Donkey Boiler Fee ... \$: : 24.8.1938

Travelling Expenses (if any) \$ 75 : 60. - 24.8.1938

Committee's Minute

FRI 2 SEP 1938

Assigned

See Groninger 34



© 2020

Lloyd's Register Foundation