

REPORT ON OIL ENGINE MACHINERY.

No. 7.

Date of writing Report 19 When handed in at Local Office 19 Port of **DUSSELDORF** Received at London Office 21 APR 1928
No. in Survey held at **Cologne-Deutz** Date, First Survey 18. I. 28. Last Survey 21. III. 1928.
Reg. Book. Number of Visits 6

Single
on the Twin } Screw vessel
Triple
Quadruple
Built at By whom built **Norwegian Workshop** Yard No. **644** When built
Engines made at **Cologne-Deutz** By whom made **Motorenfabrik Deutz A.G.** Engine No. **202604/09** When made **1928**
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power **330 HP** Owners Port belonging to
Nom. Horse Power as per Rule **95** 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 Eng. S.V.M.S. 150** 2 or 4 stroke cycle Single or double acting
Maximum pressure in cylinders **40 kg. p. approx.** Diameter of cylinders **280 mm.** Length of stroke **500 mm.** No. of cylinders **Six** No. of cranks **Six**
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **334 mm.** Is there a bearing between each crank **Yes**
Revolutions per minute **300** Flywheel dia. **1100 mm.** Weight **2639 kg.** Means of ignition **Fuel spray** Kind of fuel used
Crank Shaft, dia. of journals as per Rule Crank pin dia. **170 mm.** Crank Webs Mid. length breadth **260 mm.** Thickness parallel to axis
as fitted **170 mm.** Mid. length thickness **88 mm.** shrunk Thickness around eyehole
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted Thickness around eyehole
Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the { tube } shaft fitted with a continuous liner {
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 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 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 **by cam shaft** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **Yes** Means of lubrication
by pressure Thickness of cylinder liners **23 mm.** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material **water** 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 **68 mm.** Can one be overhauled while the other is at work **Yes**
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 **One both wheel pump and one spare**
Are two independent means arranged for circulating water through the Oil Cooler **Yes** 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 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
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 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 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 **130 and 150 mm.** Stroke **130 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 **Yes**
Can the internal surfaces of the receivers be examined **Yes** What means are provided for cleaning their inner surfaces
Is there a drain arrangement fitted at the lowest part of each receiver **Yes**
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
Starting Air Receivers, No. **Three** Total cubic capacity **500 litres each** Internal diameter **450 mm.** thickness **11 mm.**
Seamless, lap welded or riveted longitudinal joint **Lap welded** Material **Mild Steel** Range of tensile strength **38.6 kg. p. mm.** Working pressure by Rules **25 kg. p. mm.**

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *18.11.1927* (If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR *as given in the Rules.*

The foregoing is a correct description.

Motorenfabrik Deutz

Altenberger

Manufacturer.

Dates of Survey while building

During progress of work in shops - -
During erection on board vessel - -
Total No. of visits

18.1.28, 24.1.28, 23.2.28, 27.2.28, 29.2.28 and 21.3.28.

Six.

Dates of Examination of principal parts—Cylinders *18.1.28*. Covers *18.1.28*. Pistons *24.1.28*. Rods *24.1.28*. Connecting rods *24.1.28*.

Crank shaft *20.1.27*. Flywheel shaft. Thrust shaft *17.1.27*. 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 *M.K. 1025*. Flywheel shaft, Material. Identification Mark.

Thrust shaft, Material *S.M. Steel*. Identification Mark *M.K. 1021*. 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.

Is this machinery duplicate of a previous case *No.* If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines are built in accordance*

*with the approved plans and the requirements embodied in the Secretary's letter of 18.11.1927 and otherwise in accordance with the requirements of the Rules. Materials and the workmanship are of the best quality, the outfit is ample. The machinery has been tested under full working conditions for about six hours on the trial stage in machine shop and has given full satisfaction. After trials all working parts have been opened up and were found on examination in good condition. This machinery has been built under special survey, is eligible in my opinion for notation of *NE. 3.28.* and will be forwarded to Maniba.*

Certificate (if required) to be sent to

The amount of Entry Fee ... £ *2 : 0 :* When applied for,
Special ... £ *23 : 15 :* *9.11.1928*
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ *3 : 10 :* *25/4/28*

Committee's Minute

21/5/28
FBI 27 JUL 1928

Assigned

See Sd. Kg. Sd. rpt. No 6300

Paul Shaw
Engineer Surveyor to Lloyd's Register of Shipping.



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