

REPORT ON OIL ENGINE MACHINERY.

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Port of **DUSSELDORF**

No. in Survey held at **Cologne-Deutz**

Date, First Survey **18. I. 28.** Last Survey **21. III. 1928.**

Reg. Book.
 on the **Single**
 Twin
 Triple
 Quadruple } Screw vessel

Tons }
 Gross
 Net

Built at _____ By whom built **Hongkong & Whampoa** 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 **330HP** 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 _____ as fitted **170 mm.** Crank pin dia. **170 mm.** Crank Webs Mid. length breadth **260 mm.** Thickness parallel to axis **shrunk** Mid. length thickness **88 mm.** Thickness around eyehole _____
 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 **165 mm.**
 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 { screw } _____
 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 _____
 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 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 **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 _____ }
 Lubricating Oil Pumps, including Spare Pump, No. and size **One tooth wheel pump and one spare**

Ballast Pumps, No. and size _____ Oil Cooler **Yes** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces _____
 Are two independent means arranged for circulating water through the _____
 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 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 **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 _____

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 **Yes**
 Is there a drain arrangement fitted at the lowest part of each receiver _____
 High Pressure Air Receivers, No. _____ Cubic capacity of each _____ Internal diameter _____ thickness _____ Working pressure by Rules _____
 Seamless, lap welded or riveted longitudinal joint _____ Material _____ Range of tensile strength _____ thickness _____
 Starting Air Receivers, No. **Three** Total cubic capacity **500 litres each** Internal diameter **450 mm.** thickness **11 mm.** Working pressure by Rules **25 kg. p. approx.**
 Seamless, lap welded or riveted longitudinal joint **Lap welded** Material **Mild Steel** Range of tensile strength **386 kg. p. approx.**



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

18.5.28, 24.7.28, 23.8.28, 27.10.28, 29.11.28 and 21.12.28.

Total No. of visits

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 *20.11.27*. Flywheel shaft. Thrust shaft *17.11.27*. 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 Surveyors are requested not to write on or below the space for Committee's Minute.)

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

Committee's Minute

FBI 27 JUL 1928

Assigned

See S.H. Rep. No 6300

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



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