

Rpt. 4b.

Auxiliary  
REPORT ON OIL ENGINE MACHINERY.

-9 OCT 1935

No. 1741.

Received at London Office

-9 OCT 1935

Date of writing Report 2nd October 1935 When handed in at Local Office 3rd October 1935 Port of Bremen

No. in Survey held at Augsburg  
Reg. Book.

Date, First Survey 15th March 1935 Last Survey 16th August 1935  
Number of Visits 30.

Single  
on the Twin  
Triple  
Quadruple  
Screw vessel

Tons  
Gross  
Net

Built at Hamburg  
Engines made at Augsburg

By whom built Deutsche Werft A.G.

Yard No. 164 When built 1935

By whom made Maschinenfabrik Augsburg-Hamburg

Engine No. 480360/370 When made 1935

By whom made

Boiler No. When made

Donkey Boilers made at

Brake Horse Power 125

Owners Atlantik Tank Reederei

Port belonging to Hamburg

Nom. Horse Power as per Rule 35.7

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines 2 x 4 1/2 33 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 49.7 atm. Diameter of cylinders 2207 mm Length of stroke 330 mm No. of cylinders 2 x 4 No. of cranks 2 x 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 258 mm

Is there a bearing between each crank

Revolutions per minute 400 Flywheel dia. 1500 mm Weight 2350 kg

Means of ignition dir. inf. Kind of fuel used Diesel oil on test bed.

Crank Shaft, dia. of journals as per Rule as fitted 1307 mm

Crank pin dia. 1307 mm

Crank Webs Mid. length breadth 240 mm Mid. length thickness 62 mm

Thickness parallel to axis

Thickness around eye-hole

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 screw 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

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

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Means of lubrication

Thrust Thickness of cylinder liners 16 mm

Are the cylinders fitted with safety valves Yes

Are the exhaust pipes and cylinders 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.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

What special arrangements are made for dealing with cooling water if discharged into bilges

Bilge Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

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

Ballast Pumps, No. and size

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1.06 m<sup>3</sup> per hr. at 400 revs.

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 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

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position —

AIR RECEIVERS:—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 Is a drain fitted at the lowest part of each receiver

High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness by Rules

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure Actual

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness by Rules

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure Actual

W1349-0204



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 *yes, 057957 4.1.35* Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*

State the principal additional spare gear supplied

The foregoing is a correct description.

Maschinenfabrik Augsburg-Nürnberg A.G.

*Adrian*

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *March 1935: 15, April: 6, May: 24, 31, June: 5, 29, July: 2, 5, 6, 10, 11, 12, 13, 15, 16, 18, 19, 20, 23, 24, 25, 26, 27, August: 1, 2, 3, 9, 12, 13, 16*

{ During erection on board vessel - - } *24.5.35, 28.5.35, 16.9.35*

Total No. of visits *lines: 24.5.35, 28.5.35, 16.9.35*

Dates of Examination of principal parts—Cylinders *31.5.35* Covers *2.7.35* Pistons *28.6.35, 28.8.35, 16.9.35* Rods Connecting rods *29.6.35*

Crank shaft *28.8.35, 16.9.35* Flywheel shaft Thrust shaft 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 *LLOYD'S K.S. 1752 6.4.35* 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 *Prunus Vulkan 713*

General Remarks (State quality of workmanship, opinions as to class, &c. *These heavy oil auxiliary engines have been constructed under Special Survey in accordance with the Soc. Rules and Regulations as well as with the approved plans and instructions thereto. The material used in the construction is good and the workmanship is satisfactory.*

*The auxiliary engines have been tested running on the makers test bed during 8 hours under full load and were found to work satisfactorily.*

*Working pressure in the cylinders not to exceed 49 atm.*

*In my opinion the vessel for which these auxiliary engines are intended will be eligible for the notation of \*LMC [with date] when the whole machinery has been fitted satisfactorily on board and tried under full working conditions.*

*A copy of this Report has been sent to the Hamburg office*

Certificate (if required) to be sent to

The amount of Entry Fee	£	:	:	When applied for,
Special	...	£	:	19
Donkey Boiler Fee	...	£	:	When received,
Travelling Expenses (if any)	£	:	:	19

Committee's Minute

Assigned

WED. 29 JAN 1936 TU 10 MAR 1936

*See Ham. J.E. 21754*

*L. Thawob*

Engineer Surveyor to Lloyd's Register of Shipping.



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