

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 1314.

Date of writing Report *16th Dec. 1930* When handed in at Local Office *N.N. 12. 1930* Port of *Bremen* Received at London Office 31 DEC 1930

No. in Survey held at *Augsburg* Date, First Survey *21st February 1930* Last Survey *16th Dec. 1930*
Reg. Book. Number of Visits *48*

Single }
on the Twin } Screw vessel
Triple }
Quadruple }

Built at *Hamburg* By whom built *Deutsche Werft* Yard No. *144* When built *1930*
Engines made at *Augsburg* By whom made *Masch. Fabrik Augsburg-Nürnberg* Engine No. *330440* When made *1930*
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power *3100* Owners Port belonging to
Nom. Horse Power as per Rule *1175* Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines *1* D62u 60/90* 2 or 4 stroke cycle *2* Single or double acting *double*

Maximum pressure in cylinders *45 atm* Diameter of cylinders *600 mm* Length of stroke *900 mm* No. of cylinders *6* No. of cranks *6*

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *885 mm* Is there a bearing between each crank *yes*

Revolutions per minute *110* Flywheel dia. *2100 mm* Weight *2350 kg* Means of ignition *solid inject.* Kind of fuel used *Gasolol*

Crank Shaft, dia. of journals as per Rule *419.6 mm* Crank pin dia. *419.6 mm* Crank Webs Mid. length breadth *520 mm* Thickness parallel to axis
as fitted *419.6 mm* Mid. length thickness *235 mm* shrunk Thickness around eye-hole

Flywheel Shaft, diameter as per Rule *420 mm* Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collar as per Rule
as fitted *420 mm* 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 { screw }

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

Method of reversing *direct compressed air* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication
forced Thickness of cylinder liners *42.5 mm* Are the cylinders fitted with safety valves *yes* Are the exhaust pipes *and silencers* water cooled or lagged with
air space & lagged 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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 Lubricating Oil Pumps, including Spare Pump, No. and size *rotary pumps 38 mm³/s, driven by main engine*

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. *1 Tandem* Diameter *1380 mm* Stroke *700 mm* Driven by *main engine*

Auxiliary Engines crank shafts, diameter as per Rule
as fitted

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

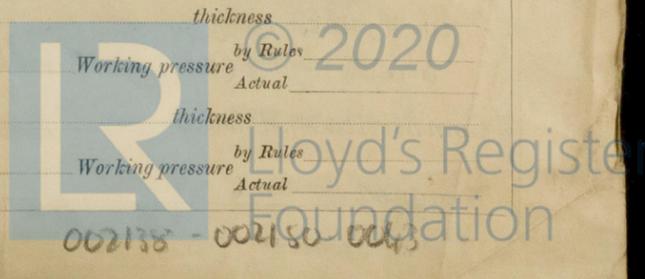
Can the internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver

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

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

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

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



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, London letters E* Receivers *31.3.30, 23.5.30, 11.6.30* Separate Tanks...
(If not, state date of approval) *30.9.30 (Dinnerdorf)*

Donkey Boilers... General Pumping Arrangements... Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied *as per Rules.*

State the principal additional spare gear supplied

The foregoing is a correct description,
Maschinenfabrik Augsburg-Nürnberg A.-G.

M. Schumann - J. Rohmann Manufacturer.

Dates of Survey while building
During progress of work in shops - *2 Feb, 30 April, 19, 20, 22 May, 16, 25, 28 June, 1, 8, 19, 21, 23 July, 6, 7, 18, 23 August, 6, 7, 8, 30 Sept, 4, 6, 7, 13, 14, 20, 21, 22, 25, 27, 28, 29, 30. 10, 11, 19, 20, 26, 29 Nov, 1, 2, 3, 8, 9, 10, 16 Dec. 1930.*
During erection on board vessel - - -
Total No. of visits

Dates of Examination of principal parts - Cylinders *30.9/25.10.30* Covers *19.5/6.9.30* Pistons *21.7.30* Rods *8.11.30* Connecting rods *25.10.30*

Crank shaft *4.10.30* Flywheel shaft *10.12.30* 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 F.S. 835/836/837 25.8.30* Flywheel shaft, Material *S. M. Steel* Identification Mark *LLOYD'S F.K. 2194.31.10.30 7.8.28.11.30*
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 If so, state name of vessel
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 Soc. Rules and Regulations as well as with the approved plans and instructions
The materials used in the constructions are good and the workmanship is satisfactory.
In my opinion the vessel for which this engine is intended will be eligible for the notation of LMC [with d.a.]
when the machinery has been fitted satisfactory on board and tried under full working conditions.
A copy of this report has been sent to the Hamburg surveyors

The amount of Entry Fee .. £ 4 : 16 :
Special £ 103 : 10 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ 2 : 10 :
When applied for, *29.12.1930*
When received, *3/2/31*

Committee's Minute
Assigned

J. Growob
Engineer Surveyor to Lloyd's Register of Shipping



Forward New Reps BA 7/12

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute)