

Rpt. 43  
First Entry  
No. 24115

# REPORT ON OIL ENGINE MACHINERY.

No. 2118.

MAY 6 1939

JUL 3 1939

Received at London Office

Name *Gallia* Date of writing Report *20th April 1939* When handed in at Local Office *2.5.1939* Port of *Bremen*  
No. in Survey held at *Rugby* Date, First Survey *2nd May 1938* Last Survey *28th April 1939*  
Reg. Book. Number of Visits *83*

Single  
on the Twin } Screw vessel  
Triple }  
Quadruple }

Built at *Hamburg* By whom built *Messrs. Deutsche Werft A.G. Yard No. 227* When built *1939*  
*681569/50*

Engines made at *Rugby* By whom made *Messrs. M. A. M.* Engine No. *(When made 1939)*

Donkey Boilers made at *✓* By whom made *✓* Boiler No. *✓* When made *✓*

Brake Horse Power *2 x 2550* Owners *Messrs. Texas Oil Comp.* Port belonging to *✓*

Nom. Horse Power as per Rule *2 x 583 = 1166* Is Refrigerating Machinery fitted for cargo purposes *✓* Is Electric Light fitted *✓*

Trade for which vessel is intended *20 1/2 35-70*

IL ENGINES, &c. — Type of Engines *2 x 9 8 7/8 in 52/90* 2 or 4 stroke cycle *2* Single or double acting *single*

Maximum pressure in cylinders *45 atm.* Diameter of cylinders *520 mm* Length of stroke *900 mm* No. of cylinders *2 x 8* No. of cranks *2 x 8*

Mean Indicated Pressure *55* Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *680 mm* Is there a bearing between each crank *yes*

Revolutions per minute *166* Flywheel dia. *1932 mm* Weight *980 kg* Means of ignition *dis. ign.* Kind of fuel used *✓*

Crank Shaft, { Solid forged as per Rule  
Semi built dia. of journals as fitted *350 mm*  
All built Crank pin dia. *350 mm* Crank Webs Mid. length breadth *520 mm* Thickness parallel to axis *shrunk*  
Mid. length thickness *160 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 *✓*

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 *direct by 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 *40 mm* Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material *lagged* 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 *✓*

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 *✓*

Ballast Pumps, No. and size *Main engine* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *One each engine 90 mm<sup>3</sup>/h; n<sup>o</sup> 415*

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 *✓*

Is that provision is made for first Charging the Air Receivers *✓*

Scavenging Air Pumps, No. *One each engine, rotary type, n = 707* output *434 m<sup>3</sup>/h* Driven by *main engines*

Auxiliary Engines crank shafts, diameter as per Rule as fitted *✓* No. *✓* Position *✓*

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



002620-002630-0251



**AIR RECEIVERS:**—Have they been made under survey

Are reports or certificates now forwarded

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

**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

Actual

**Starting Air Receivers, No.**

Total cubic capacity

Internal diameter

thickness

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 *25th August 1937* Receivers

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 *2 pistons, 2 cyl. covers, 2 upper & 2 lower cyl. liners, 6 starting valves.*

The foregoing is a correct description.

*Maschinenfabrik Augsburg-Nürnberg A.G.*

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 1938. May 2, Oct. 20, Nov. 30 Dec. 13, 16, 21, 23. 1939 Jan. 6, 7, 12, 13, 18, 19, 25, 26, 27, 30, 31. Feb. 2, 3, 4, 6, 7, 8, 9, 10, 11, 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 27, 28. March 1, 2, 3, 4, 7, 8, 9, 10, 11, 13, 14, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. April 1, 4, 5, 6, 11, 12, 13, 17, 18, 19, 21, 22, 24, 25, 26, 27, 28.  
During erection on board vessel -  
Total No. of visits *83*.

Dates of Examination of principal parts—Cylinders *23. 2. 39. 13. 12. 2. 39.* Covers *13. 12. 2. 39.* Pistons *21. 2. 39.* Rods *✓* Connecting rods *various*  
Crank shaft *24. 2. 39.* 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 *4404 D'S V.S. 1839 20. 12. 38* Flywheel shaft, Material *✓* Identification Mark *✓*  
Thrust shaft, Material *✓* Identification Mark *4404 D'S J.L. 13949 15. 12. 38.* 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 *J. H. Gaud 181; 216; 217.*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)

*These heavy oil main engines have been constructed under special survey in accordance with the Society's Rules & Regulations, as well as with the approved plans and instructions thereto.*

*The material used in the construction is good, and the workmanship satisfactory.*

*These engines have not been tested on the makers' test bed.*

*In our opinion the vessel, for which these engines are intended, will be eligible for the notation of + L. M. C. (with date) when the whole machinery has been satisfactorily fitted on board, and tried in full working condition.*

The amount of Entry Fee *4/5 Pm. 96.: 00* : When applied for,  
Special ... *7/5 Pm. 2068.: 00* : *5. 5. 1939.*  
Donkey Boiler Fee ... £ - : - :  
Travelling Expenses (if any) *12 86.: 00* : *6. 6. 39.*

Committee's Minute

Assigned

*See P.E. machy rpt.*

*W. F. Petersen*  
Engineer Surveyor to Lloyd's Register of Shipping.



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