

Rpt. 40  
First Entry  
No. 24115

# REPORT ON OIL ENGINE MACHINERY.

No. 2118.

Received at London Office

MAY 6 1939

JUL 3 1939

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

Single }  
Twin } Screw vessel  
Triple }  
Quadruple }  
Built at Hamburg By whom built Messrs. Deutsche Werft A.G. Yard No. 227 When built 1939  
Engines made at Rugby By whom made Messrs. M. A. M. Engine No. 681569/570 (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 585 = 1166 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓  
Trade for which vessel is intended 20 1/2 35-70

TYPE OF ENGINES, &c. — Type of Engines 2 x 9 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 }  
{ Semi built } dia. of journals as per Rule 350 mm Crank pin dia. 350 mm Crank Webs { Mid. length breadth 520 mm Thickness parallel to axis ✓  
{ All built } as fitted 350 mm { Mid. length thickness 160 mm Thickness around eye-hole ✓

Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as per Rule ✓ Thrust Shaft, diameter at collars as per Rule ✓

Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as per Rule ✓ Is the { tube } shaft fitted with a continuous liner { 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 stern tube ✓

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 ✓

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 ✓

and 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 Stroke 434 mm<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 ✓



**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 <sup>mark</sup> 25th August 1937. Receivers  Separate Fuel Tanks   
 (If not, state date of approval)  
 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.

*W. Wilmann* 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. K. 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 maker's 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 £ 96.00* : When applied for, *5. 5. 1939.*  
 Special ... *7/5 £ 2068.00* :  
 Donkey Boiler Fee ... £ - : : When received,  
 Travelling Expenses (if any) *1/2 £ 86.00* : *6. 6. 1939.*

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

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

Committee's Minute *FRI 14 JUL 1939*  
 Assigned *See PE machy rpt.*

