

28 MAR 1928

Rpt. 4b

# REPORT ON OIL ENGINE MACHINERY

No. 11957

12 DEC 1927

Received at London Office

Date of writing Report 8<sup>th</sup> Dec 27 When handed in at Local Office 10 Port of HAMBURG

No. in Survey held at KIEL Date, First Survey 25<sup>th</sup> FEBRUARY Last Survey 7<sup>th</sup> DECEMBER 1927

Reg. Book. Single on the Twin Triple Quadruple Screw vessel N<sup>o</sup> 517 T.S.M.V. VICTOLITE Tons Gross 11409 Net 6711

Built at LINTHOUSE-GOWAN By whom built F. STEPHEN & SONS L<sup>o</sup> Yard No. 517 When built 1928.3

Engines made at KIEL By whom made FRIED. TRUPP A.G. GERMANIA Engine No. 20442 When made 1927

Donkey Boilers made at KIEL By whom made FRIED. TRUPP A.G. GERMANIA Boiler No. 23839 When made 1927

Brake Horse Power 2 x 1750 Owners Imperial Oil Co. L<sup>o</sup> Port belonging to Germany

Nom. Horse Power as per Rule 998.5 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended TANKER

**ILL ENGINES, &c.** Type of Engines 20 cylinders. Type Krupp-Germania. 2 or 4 stroke cycle 2. Single or double acting single

Maximum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 680 mm Length of stroke 1300 mm No. of cylinders 2 x 4 = 8 No. of cranks 2 x 4 = 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1010 mm Is there a bearing between each crank Yes

Revolutions per minute 90 Flywheel dia. 2300 mm Weight 10000 kg Means of ignition Spark plug Kind of fuel used Diesel Gas oil

Crank Shaft, dia. of journals 439.5 mm Crank pin dia. 440 mm Crank Webs Mid. length breadth 685 mm Thickness parallel to axis 375 mm

Flywheel Shaft, diameter 439.5 mm 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 screw shaft fitted with a continuous liner Yes

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 propeller boss Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes

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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes

Length of Bearing in Stern Bush next to and supporting propeller as per Rule

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

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engines when declutched Yes Means of lubrication as per Rule

Thickness of cylinder liners 50 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine as per Rule

Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 200 mm Stroke 218 mm Can one be overhauled while the other is at work Yes

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

Ballast Pumps, No. and size as per Rule Lubricating Oil Pumps, including Spare Pump, No. and size 2 of rotary type, each 230 mm per hour

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

In Holds, &c. as per Rule

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size as per Rule

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-bozes Yes Are the Bilge Suctions in the Machinery Spaces as per Rule

Are all from easily accessible mud-bozes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks as per Rule

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above or below the deep water line as per Rule

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate as per Rule

That pipes pass through the bunkers as per Rule How are they protected as per Rule

That pipes pass through the deep tanks as per Rule Have they been tested as per Rule as per Rule

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times as per Rule

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 as per Rule

Is the Shaft Tunnel watertight as per Rule Is it fitted with a watertight door as per Rule worked from as per Rule

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork as per Rule

Main Air Compressors, No. 2 No. of stages 3 Diameters 150-620-710 mm Stroke 700 mm Driven by main engine

Auxiliary Air Compressors, No. as per Rule No. of stages as per Rule Diameters as per Rule Stroke as per Rule Driven by as per Rule

Small Auxiliary Air Compressors, No. as per Rule No. of stages as per Rule Diameters as per Rule Stroke as per Rule Driven by as per Rule

Scavenging Air Pumps, No. 2 x 2 Diameter 780 mm Stroke 1300 mm Driven by main engine

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

**RECEIVERS:** Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes with exception of the two dead bottles

Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces machete and gravel cover

Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. 2 Cubic capacity of each 408 litres Internal diameter 410 mm thickness 17.5 mm

Unless, lap welded or riveted longitudinal joint seamless Material A. Steel Range of tensile strength 36-411 kg/cm<sup>2</sup> Working pressure by Rules 69 kg/cm<sup>2</sup>

Starting Air Receivers, No. 3 Total cubic capacity 8 x 2730 litres Internal diameter 1000 mm thickness 24 mm

Unless, lap welded or riveted longitudinal joint seamless Material A. Steel Range of tensile strength 41-447 kg/cm<sup>2</sup> Working pressure by Rules 66 kg/cm<sup>2</sup>

W134-0021

IS A DONKEY BOILER FITTED? *Yes. See general notes* If so, is a report now forwarded? *Yes*

PLANS. Are approved plans forwarded herewith for Shafting *of crank, blind shaft, Receivers* *Yes* Separate Tanks *Yes*  
(If not, state date of approval)

Donkey Boilers *Yes* General Pumping Arrangements *Yes* Oil Fuel Burning Arrangements *Yes*

SPARE GEAR *With regard to main engine all spare articles required by the Rules for the Construction and Survey of Diesel engines (1926/27) Section 6 have been supplied.*

The foregoing is a correct description,  
**FRIED. KRUPP**  
**GERMANIAWERKE**  
 Aktiengesellschaft *Friedrichshafen* Manufacturer.

Dates of Survey while building  
 During progress of work in shops - *25/2-1/3-2/3-25/3-29/3-12/4-24/4-2/5-6/5-10/5-24/5-27/5-3/6-8/6-16/6-24/6-28/6-6/7-2/8-5/8-10/8-13/8-20/8-4/9-11/9-12/9*  
 During erection on board vessel - *29/3-2/4-6/4-13/4-20/4-23/4-29/4-5/5-10/5-10/5-17/5-19/5-24/5-28/5-31/5-4/6-7/6-9/6-14/6-23/6-28/6-7/12/27*  
 Total No. of visits *in shops 17*

Dates of Examination of principal parts - Cylinders *25/2-29/3/27* Covers *10/5-29/8/27* Pistons *26-29/10/27* Rods *24/27-24/9/27* Connecting rods *23/4-19/8/27*  
 Crank shaft *10/6-16/8/27* Flywheel shaft Thrust shaft *28/6/27-23/9/27* 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 *See entry 14/10*  
 Crank shaft, Material *Steel* Identification Mark *3059.94/12/13 46.7.176.17* Flywheel shaft, Material *Steel* Identification Mark *607/605*  
 Thrust shaft, Material *Steel* Identification Mark *3165.434 147. 4.8.27* 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. *Yes*

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, etc. *Material & workmanship of these main engines and air receiver are of good quality. The materials used in the construction are made at works recognized by the Committee and tested by the Society's Surveyors. Main engine and receiver have been built under Special Survey in conformity with the approved plans. The Secretary's letters and other documents in accordance with the requirements of the Rules are eligible in my opinion for ratification. L.H.C. Oil engines (with date) subject to satisfactory installation on board and examination under full working and manoeuvring conditions; also fitting of safety valve to the two flat boiler. Engines and receiver have now been shipped to Glasgow.*

The amount of Entry Fee ... £ 6. : 0 :  
 Special ... £ 124 : 18 :  
 Donkey Boiler Fee ... £ 16. : 16. :  
 Travelling Expenses (if any) £ 13 : 18 :

When applied for, *10 Dec. 1927*  
 When received, *30 Dec. 1927*

**Friedrich Witt**  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 Lloyd's Register Foundation

Committee's Minute **GLASGOW 27 MAR 1928**  
 Assigned *See G.L. Rpt. No. 47740*

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