

## REPORT ON OIL ENGINE MACHINERY.

No. 18678

Received at London Office 13 MAY 1929  
 Writing Report 12 May 1929 When handed in at Local Office 10 Port of **HAMBURG**  
 Survey held at **TIEL** Date, First Survey 13<sup>th</sup> APRIL 1928 Last Survey 10<sup>th</sup> MAY 1929  
 Number of Visits 68

On the **Single** Screw vessel **"CALMAROLITE"** Tons Gross 11940 Net 6611.  
 at **HAVERTON HILL-ON-TESS** By whom built **FURNESS & B. CO.** Yard No. 131 When built 1929  
 as made at **TIEL** By whom made **FRIED. KRUPP-GERMANIA WERKE AG** Engine No. 1177 When made 1925  
 Boilers made at **Glasgow** By whom made **Balcan, Wilcon** Boiler No. 6/1231 When made 1929  
 Horse Power 2 x 2500 Owners **Imperial Oil Co. Ltd.** Port belonging to **Middleborough**  
 Horse Power as per Rule 1496 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 for which vessel is intended

ENGINES, &c. Type of Engines 2 Oil Engines Type: **Krupp-Germania Port Engines** 2 or 4 stroke cycle 2 Single or double acting single  
 pressure in cylinders 35 kg Diameter of cylinders 680 mm Length of stroke 1300 mm No. of cylinders 2 x 6 No. of cranks 2 x 6  
 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. 2360 mm Weight 13000 kg Means of ignition **Pierce Price** Kind of fuel used **Pierce Oil**  
 shaft, dia. of journals as per Rule 449.5 mm as fitted 450 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 720 mm Thickness parallel to axis 280 mm  
 as per Rule 440 mm as fitted 440 mm Intermediate Shafts, diameter as per Rule 440 mm as fitted 440 mm Thrust Shaft, diameter at collars as per Rule 440 mm as fitted 440 mm

shaft, diameter as per Rule 440 mm as fitted 440 mm Screw Shaft, diameter as per Rule 440 mm as fitted 440 mm Is the tube shaft fitted with a continuous liner Yes  
 liners, thickness in way of bushes as per Rule 440 mm as fitted 440 mm Thickness between bushes as per Rule 440 mm as fitted 440 mm Is the after end of the liner made watertight in the

ss If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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  
 rs are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after  
 tube shaft Length of Bearing in Stern Bush next to and supporting propeller

dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet  
 of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

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  
 ting 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

Water Pumps, No. 3 incl. spare Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
 mps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

connected to the Main Bilge Line No. and Size How driven  
 mps, No. and size Lubricating Oil Pumps, (including Spare Pump) No. and size 2 rotary type 30 gpm per hour

dependent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
 and size—In Machinery Spaces

ent Power Pump Direct Suctions to the Engine Room Bilges, No. and size  
 e Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Spaces

asily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges  
 a Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

ed 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  
 ch 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

pass through the bunkers How are they protected  
 pass through the deep tanks Have they been tested as per Rule

es, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times  
 ngement 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

to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from  
 vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Compressors, No. 2 1 carb main engine No. of stages 3 Diameters 800/700/175 Stroke 900 mm Driven by main engine  
 Air Compressors, No. 2 No. of stages 3 Diameters 320/280/80 Stroke 300 mm Driven by 1st Diesel Eng.

illary Air Compressors, No. 1 No. of stages 2 Diameters 160/65 Stroke 160 mm Driven by electric motor  
 g Air Pumps, No. 2 x 3 Diameter 780 mm Stroke 1300 mm Driven by main engine

Engines crank shafts, diameter as per Rule 130 mm as fitted 140 mm pin 135 mm 167 mm 170 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes  
 ernal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces manholes - doors - pressure covers

drain arrangement fitted at the lowest part of each receiver Yes  
 ssure Air Receivers, No. 2 Cubic capacity of each 408 litres Internal diameter 410 mm thickness 17.5 mm

p welded or riveted longitudinal joint seamless Material T.M. Steel Range of tensile strength 36-41 kg Working pressure by Rules 69 kg  
 Air Receivers, No. 5 Total cubic capacity 5 x 2730 litres Internal diameter 1800 mm thickness 34 mm 38 mm 42 mm

lap welded or riveted longitudinal joint riveted Material T.M. Steel Range of tensile strength 41-47 kg Working pressure by Rules 66 kg  
 W16-0023



# IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

## SPARE GEAR

All articles as required by Section 6 - page 117 of the Rules for the Conducting Report and Survey of Diesel Engines and their Auxiliaries (1928/29) have been supplied

The foregoing is a correct description.

**FRIED. KRUPP**  
**GERMANIAWERKE**  
Aktiengesellschaft

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 13/4-16/4-23/4-2/5-16/5-1/6-6/6-13/6-22/6-25/6-29/6-7/7-7/7-3/8-6/8-8/8-15/8-17/8-20/8-3/9-5/9-18/9-5/10-19/10-16/11-30/11  
During erection on board vessel - 28/1-30/1-1/2-15/2-22/2-4/3-6/3-10/3-13/3-5/5-19/5/29  
Total No. of visits 38

Dates of Examination of principal parts - Cylinders 16/5 - 30/5 Covers 29/6 - 29/11/29 Pistons 20/6 - 13/3/29 Rods 24/1/28 - 30/11/28 Connecting rods 24/3/28

Crank shaft 17/8/28 Flywheel shaft T Thrust shaft 17/8/28 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 L.M. Steel Identification Mark 7001-C.R.H. 10.5.28 Flywheel shaft, Material L.M. Steel Identification Mark 6823-C.R.H. 10.5.28

Thrust shaft, Material Lee Pye steel Identification Mark Spare 8495 H.K. 30.8.28 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, &c.) Material and workmanship of

and Auxiliary Diesel Oil engine and Air Receiver are of good quality. Materials used in the construction are made at works recognized by the Committee and tested by the Society's Surveyors. Oil engine and Receiver have been constructed under Special Survey in accordance with the approved plan of the Secretary's letters and otherwise in accordance with the requirements of the Rules and are eligible in my opinion for certification. L.M.C. engines (with date) subject to satisfactory installation on board and examination under full working and manoeuvring conditions. Engines and Receiver have been shipped to Harston Y.

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

The amount of Entry Fee ... £ 6 : - : When applied for,  
Special ... £ 134 : 8 : 7.5.29  
Donkey Boiler Fee ... £ 10 : 10 :  
5 Air Receivers ... £ 16 : 2 : 4 June 1929  
Travelling Expenses (if any) ...

Committee's Minute

Assigned

*Friedrich Hill*

Engineer Surveyor to Lloyd's Register of Shipping

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