

REPORT ON OIL ENGINE MACHINERY.

No. 18678

Recorded at London Office 13 MAY 1925

Writing Report 12th May 1929 When handed in at Local Office

Port of HAMBURG

Survey held at TIEL

Date, First Survey 13th APRIL 1928 Last Survey 10th MAY 1929

Number of Visits 68

On the Single Twin Triple Quadruple Screw vessel

"CALGAROLITE"

Tons Gross 11940
Net 6611

at HAVERTON HILL OX TEES By whom built FURNESS & B. CO. Yard No. 131 When built 1929

Engines made at TIEL By whom made FRIED. KRUPP-GERMANIA WERKE Engine No. 1277 When made 1925

Boilers made at Glasgow By whom made Balcan, Wilson Boiler No. 6/1231 When made 1929

Horse Power 2 x 2500 Owners Imperial Oil Co. Ltd. Port belonging to Middlesbrough

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 Steam 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

Cranks, 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 Picrel Pinc. Kind of fuel used Picrel Oil

Shaft dia. of journals as per Rule 449.5 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 720 mm Thickness parallel to axis 280 mm

Shaft, diameter as per Rule 440 mm Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule 440 mm

Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner

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 Yes 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

Are the bearings 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

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

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

insulating 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

Pumps worked from the Main Engines, No. 2 Diameter 1000 mm Stroke 1000 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size 2 How driven Electric

Pumps, No. and size Lubricating Oil Pumps (including Spare Pump) No. and size 2 rotary type 300 mm per hour

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

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

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Spaces

readily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are the Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are the Overboard Discharges above or below the deep water line

Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Have they been tested as per Rule

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

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

space to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

Are the means provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Compressors, No. 2 1/2 carb main engine No. of stages 3 Diameters 800/700/175 mm Stroke 900 mm Driven by Main engine

Air Compressors, No. 2 No. of stages 3 Diameters 320/280/80 mm Stroke 300 mm Driven by by clutch to Main Diesel Eng.

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 160/65 mm Stroke 160 mm Driven by electric motor

Large 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 Journal diam 140 mm - pin - 125 mm 167 mm 170 mm

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

Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces manholes - doors - pressure cover

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

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

Are the joints welded or riveted longitudinal joint manholes Material 1/2" St. Steel Range of tensile strength 36-40 kg Working pressure by Rules 69 kg

Air Receivers, No. 5 Total cubic capacity 5 x 2730 litres Internal diameter 1000 mm thickness 34 mm

Are the joints welded or riveted longitudinal joint riveted Material 1/2" St. Steel Range of tensile strength 41-57 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 Construction and Survey of Diesel Engines and their Auxiliaries (1928/29) have been supplied

The foregoing is a correct description,

FRIED. KRUPP
GERMANIAWERKE
Aktiengesellschaft

[Signature]

Manufacturer.

Dates of Survey while building
 During progress of work in shops - 13/4-16/4-23/4-2/5-16/5-1/6-6/6-13/6-22/6-25/6-29/6-7/7-7/7-3/8-6/8-8/8-15/8-17/8-20/8-3/9-5/9-28/9-5/10-29/10-16/11-30/11
 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 - 30/1/29 Pistons 20/6 - 13/3/29 Rods 24/1/28 - 30/1/28 Connecting rods 24/3/28

Crank shaft 17/2/28 Flywheel shaft T Thrust shaft 17/2/28 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 S.M. Steel Identification Mark 7001 - C.R.N. 17.4.28 Flywheel shaft, Material S.M. Steel Identification Mark 6823
 Spare 8495 H.K. 30.8.28

Thrust shaft, Material See Flywheel shaft 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. 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 Receivers 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 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 Receivers have been shipped to Harston

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
 Travelling Expenses (if any) £ 16 : 2 : 4 June 1929

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute
 Assigned *[Signature]* No 13748
 26 JUL 1929

