

REPORT ON OIL ENGINE MACHINERY.

No. 14269

15 NOV 1930

Received at London Office

Date of writing Report 13. 11. 30 When handed in at Local Office 13. 11. 30 Port of MIDDLESBROUGH
 No. in Survey held at HAVERTON HILL ON TEES Date, First Survey 24 July Last Survey 11. 11. 1930
 Reg. Book. 2508 Sup. Number of Visits 26 August

2508 Sup. in the Single Screw vessel "F.H. BEDFORD JR." Tons 11952
Twin Triple Quadruple Net 6831

Built at Haverton Hill on Tees By whom built Furness S.B. Co. Ltd Yard No. 176 When built 1930
 Engines made at Kiel By whom made Fried. Krupp Engine No. 2862 When made 1930
 Donkey Boilers made at Glasgow By whom made Babeuys & Wilens Boiler No. 6/1258 When made 1930
 Brake Horse Power 2500 x 2 Owners BALTISCH AMERIK. PETROLEUM IMPORT G.m.b.H. Port belonging to Danzig
 Nom. Horse Power as per Rule 1496 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes
 Trade for which vessel is intended Carrying Petroleum in Bulk

IL ENGINES, &c.—Type of Engines Krupp Diesel 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 35 kg. cm² Diameter of cylinders 680 mm Length of stroke 1300 mm No. of cylinders 6 x 2 = 12 No. of cranks 6 x 2 = 12
 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 9000 kg Means of ignition Compression Kind of fuel used Diesel oil
 Crank Shaft, dia. of journals as per Rule 456 mm as fitted 450 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth 700 mm Thickness parallel to axis 280 mm
 as fitted 450 mm Mid. length thickness 280 mm shrunk Thickness around eyehole 200 mm
 Flywheel Shaft, diameter as per Rule 445 mm (app^d) as fitted 440 mm Intermediate Shafts, diameter as per Rule 13.5" as fitted 14" Thrust Shaft, diameter at collars as per Rule 440 mm (app^d) as fitted 440 mm
 Tube Shaft, diameter as per Rule 14.83" as fitted 15 3/8" Is the hub shaft fitted with a continuous liner Yes
 as fitted 15 3/8" Is the screw Yes

Bronze Liners, thickness in way of bushes as per Rule 7/16" as fitted 7/16" Thickness between bushes as per Rule 7/16" as fitted 5/8" 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 no Length of Bearing in Stern Bush next to and supporting propeller 5'-1 1/2"

Propeller, dia. 16'-0" Pitch 16'-6" No. of blades 3 Material Brass whether Moveable Yes Total Developed Surface 75 sq. feet
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication Forced
 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 lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Yes

Cooling Water Pumps, No. 2 Rotary - 240 tons per hour 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. none Diameter 1'-8" x 7' x 18"; 1'-9" x 10' x 24"; 1 - Rotary 105 tons per hour
 Pumps connected to the Main Bilge Line { No. and Size 1'-8" x 7' x 18"; 1'-9" x 10' x 24"; 1 - Rotary 105 tons per hour
 How driven Steam, Steam, Elec. mot^r

Ballast Pumps, No. and size none Lubricating Oil Pumps, including Spare Pump, No. and size 1 - Rotary 22 cu. inches per hour in each main engine
 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 4 - 3 1/2" also 1 - 6" piston bilge

In Holds, &c. To Forward Pumps: 1 - 4" Fore Peak Store; 1 - 4" Chain Locker; 2 - 4" Cargo Space; 2 - 4" Pump room
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 6" x 1 - 5"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Steel Hats with perforated covers 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 Yes

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks both
 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 above
 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 Yes

That pipes pass through the bunkers none How are they protected Yes
 That pipes pass through the deep tanks Yes Have they been tested as per Rule Yes
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

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

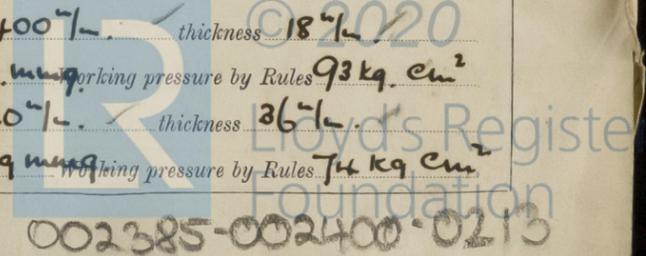
Main Air Compressors, No. 2 No. of stages 3 Diameters 800/700/175 mm Stroke 900 mm Driven by main engines
 Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 320/280/80 mm Stroke 300 mm Driven by aux. motor
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 25 c. ft. free air per min. Driven by Steam Engine
 scavenging Air Pumps, No. 6 Diameter 800 mm Stroke 1300 mm Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule 167 mm as fitted 175 mm Removed

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes
 Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces Manholes
 Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. 2 Cubic capacity of each 300 litres Internal diameter 400 mm thickness 18 mm
 Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 46/52 kg mm² Working pressure by Rules 93 kg. cm²
 Starting Air Receivers, No. 5 Total cubic capacity 13500 litres Internal diameter 1120 mm thickness 36 mm
 Seamless, lap welded or riveted longitudinal joint seamless Material S.M. Steel Range of tensile strength 46/52 kg mm² Working pressure by Rules 74 kg. cm²

Carrying fitted with Solid Injection See Bremen 1571.



IS A DONKEY BOILER FITTED? Yes - 2 Babcock Wilcox so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting 3.3.30. Receivers App^d to Hamburg Separate Tanks none
 (If not, state date of approval)

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

SPARE GEAR See Separate List herewith.

The foregoing is a correct description,

John Mc Govern DIRECTOR Manufacturer.

Dates of Survey while building
 During progress of work in shops - - 1930 July 24 Aug 12
 During erection on board vessel - - 1930 Aug 26 Sep 6 22 25 26 30 Oct 2 4 6 9 12 15 17 18 20 22 23 25 27 31 Nov 1 3 5 6 7 11
 Total No. of visits 28

Dates of Examination of principal parts - Cylinders See Hamburg Report Covers Hamburg Report Rods See Hamburg Report Connecting rods See Hamburg Report
 Crank shaft See Hamburg Report Thrust shaft See Hamburg Report Intermediate shafts 26.8.30 Tube shaft ✓
 Screw shaft 24.7.30 Propeller 12.8.30 Stern tube 24.7.30 Engine seatings 26.8.30 Engines holding down bolts 6.10.30
 Completion of fitting sea connections 12.8.30 Completion of pumping arrangements 5.11.30 Engines tried under working conditions 7.11.30
 Crank shaft, Material See Hamburg Report Identification Mark See Hamburg Report Intermediate shafts, Material S.M. Steel Identification Mark See Hamburg Report
 Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material S.M. Steel Identification Mark See Hamburg Report
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material S.M. Steel Identification Mark See Hamburg Report
 Is the flash point of the oil to be used over 150° F. Yes

Is this machinery duplicate of a previous case Yes If so, state name of vessel main engine "Calgarolite"

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

The materials and workmanship are good.
 This machinery has been securely fitted aboard under special survey and in accordance with approved plans and rule requirements. It has been tested under working conditions with satisfactory results and is, in my opinion, suitable for classification with record + L.M.C. 11.30 as per Hamburg Report 19427.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11.30 C-L

Oil Engines 2SCSA 12cy 26 3/4 - 51 3/16
 2WTDB - 200 1/2 2DB 100 1/2

J. 17/11/30

P. J. Mac

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 28-14-0 When applied for, 14 Nov 1930
 + Special ... £ : :
 Donkey Boiler Fee (2/5) ... £ 10:8 When received, 2.1.1931
 Travelling Expenses (if any) £ : :
 Committee's Minute FRI 21 NOV 1930

Assigned + L.M.C. 11.30 C-L oil eng
2 WTDB - 200 1/2 2 DB 100 1/2



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