

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.
Reg. Book.

Date, First Survey 24 July

Last Survey 11. 11. 19 30

Number of Visits

2508 Sup. in the Single Twin Triple Screw vessel "F.H. BEDFORD JR."

Tons { Gross 11952.
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. 38628 When made 1930
Donkey Boilers made at Glasgow By whom made Babcock & Wilcox 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 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 (approx) Intermediate Shafts, diameter as per Rule 13.5" Thrust Shaft, diameter at collars as per Rule 440 mm (approx)
as fitted 440 mm as fitted 14" as fitted 440 mm
Tube Shaft, diameter as per Rule 14.83" Is the tube screw shaft fitted with a continuous liner Yes
as fitted 15 3/8" as fitted 9"
Bronze Liners, thickness in way of bushes as per Rule 3/16" Thickness between bushes as per rule 7/8" Is the after end of the liner made watertight in the
as fitted 1/16" as fitted 5/8" 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 Bronze 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 Stroke Can one be overhauled while the other is at work Yes
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. motor.

Ballast Pumps, No. and size none Lubricating Oil Pumps, including Spare Pump, No. and size 1-Rotary 22 cu. inches 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 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
and 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

Is 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 800/700/757 Stroke 900 mm Driven by main engines
Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 320/280/807 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
Savenging 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

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. mm working pressure by Rules 93 kg. cm²
Starting Air Receivers, No. 5 Total cubic capacity 13500 litres Internal diameter 1120 mm thickness 26 mm
Seamless, lap welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 46/52 kg. mm working pressure by Rules 74 kg. cm²

002385-002400-0213

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*
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 14 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, 2, 5, 6, 7, 11*
Total No. of visits *28*

Dates of Examination of principal parts - Cylinders *See 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 *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 - 57 1/16
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) £ : :
ebb

Committee's Minute *FRI 21 NOV 1930*
Assigned *+ Lmb 11.30 Ch. oil on 2 WTDB - 200 1/2 2 DB 100 1/2*

