

REPORT ON OIL ENGINE MACHINERY.

No. 19427
15 NOV 1930

Received at London Office

14 JUL 1930

Date of writing Report 12th July 1930 When handed in at Local Office

10 Port of HAMBURG

Date in Survey held at

KIEL

Date, First Survey 20th January 1930 Last Survey 7th July 1930

Number of Visits 29

Type of vessel

Screw vessel

"F. H. BEDFORD JR"

Tons

Gross 11952.
Net 6831.

Built at HAVERTON HILL on TEES

By whom built FURNESS SHIPBUILDING CO LTD. Yard No. 176 When built 1930

Engines made at

KIEL

By whom made FRIED. KRUPP GERMANIA WERFT AG Engine No. 3862 When made 1930

Boilers made at

Glasgow.

By whom made Babcock & Wilcox

Boiler No. 6/1258 When made 1930

Indicated Horse Power 2 x 2500

Owners STANDARD SHIPPING CO

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 - 57 3/16

L ENGINES, &c.—Type of Engines KRUPP DIESEL ENGINES

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

Distance 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 kgs

Means of ignition Direct principle

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 275 R, 425 R

Thickness parallel to axis 280 mm

Flywheel Shaft, diameter

as per Rule as approx.

Intermediate Shafts, diameter

as per Rule 13.5

Thrust Shaft, diameter at collars

as per Rule as approx. 440 mm

Screw Shaft, diameter

as per Rule as fitted

Screw Shaft, diameter

as per Rule as fitted

Is the tube screw shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes

as per Rule as fitted

Thickness between bushes

as per Rule as fitted

Is the after end of the liner made watertight in the

Propeller boss

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

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

If so, state type

If two liners are fitted, is the shaft lapped or protected between the liners

Is an approved Oil Gland or other appliance fitted at the after end of the tube

Length of Bearing in Stern Bush next to and supporting propeller

If so, state type

Propeller, dia.

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface sq. feet

Method 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

Insulating 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

Cooling Water Pumps, No.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No.

Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size How driven

Ballast Pumps, No. and size

Lubricating Oil Pumps, [including Spare Pump] No. and size one of rotary type 22 m³ p. hour attached to each main motor

Are two 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

Holds, &c.

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

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are the Bilge Suctions in the Machinery Spaces

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

Are all Sea Connections fitted direct on the skin of the ship

Are they fitted with Valves or Cocks

Are they fixed 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

Are they each 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

How are they protected

Have they been tested as per Rule

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

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

Main Air Compressors, No. One on each engine

No. of stages 3 Diameters 800/700/175 mm Stroke 900 mm Driven by main motor

Auxiliary Air Compressors, No. 2

No. of stages 3 Diameters 320/280/80 mm Stroke 300 mm Driven by Aux. motor

All Auxiliary Air Compressors, No.

No. of stages Diameters Stroke Driven by

Suctioning Air Pumps, No. 3 on each main motor

Diameter 800 mm Stroke 1300 mm double acting Driven by main motor

Auxiliary Engines crank shafts, diameter

as per Rule 167 mm as fitted 175 mm crank pins 170 mm

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

yes What means are provided for cleaning their inner surfaces fitted with manholes or covers

Are the internal surfaces of the receivers be examined

yes Where a drain arrangement fitted at the lowest part of each receiver

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 S.M. Steel Range of tensile strength 46-52 kg/cm² Working pressure by Rules 93 kg/cm²

Working 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/cm² Working pressure by Rules 74 kg/cm²

IS A DONKEY BOILER FITTED? ☒

If so, is a report now forwarded? ☒

PLANS. Are approved plans forwarded herewith for Shafting *crank shaft 6.12.29* Receivers *4.1.30*

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 Construction and Survey of Diesel Engines and their Auxiliaries (1929-30) have been supplied with

The foregoing is a correct description,

**FRIED. KRUPP
GERMANIAWERFT**
Aktiengesellschaft

Manufacturer.

1930
Dates of Survey while building { During progress of work in shops - - Jan. 20, Feb. 3, 28, March 7, 12, 26, April 7, 9, 14, 16, 23, 28, May 2, 7, 12, 15, 19, 22, 28.
June 2, 4, 11, 18, 25, 27, 30, July 2, 4, 7.
During erection on board vessel - -
Total No. of visits 29

Dates of Examination of principal parts—Cylinders 23/4, 28/4 Covers 22/5 18/6 Pistons 14/5 Rods 12.5 Connecting rods 7.5

Crank shaft 16.4 Flywheel shaft 16.4 Thrust shaft 16.4 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 J.L. 7358/59/60. 11.3.30 in one with Thrust shaft 4400'S J.L. 7358/59/60. 11.3.30 Flywheel shaft, Material S. M. Steel Identification Mark J.L. 7358/59/60. 11.3.30

Thrust shaft, Material — 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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with ☒

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ☒ If so, have the requirements of the Rules been complied with ☒

Is this machinery duplicate of a previous case yes If so, state name of vessel Calgarolite Finner Yard 4/13

General Remarks (State quality of workmanship, opinions as to class, &c. The parts surveyed here are:

Port & Starb. Main Engines, 2 Aux. Diesel Engine Sets with Generator & Air Compressor

2 Blast air receivers, 5 Harting air receivers, and all the spare parts.

The Machinery has been built under Special Survey in accordance with the approved plans of the Secretary's Office and otherwise in accordance with the requirements of the Rules. Materials and workmanship are of good quality. The Materials used in the construction

are made at works recognised by the Committee and listed by the Loc. Surveyors.

The Machinery is eligible in my opinion for notation of * LMC Oil Engine with date subject to satisfactory installation on board and examination under working and manoeuvring condition.

The Engines have been shipped to Haverton Hill on Tues

The amount of Entry Fee £ 4/5 : 114 : 14 : 12.7.10.30
Special ...
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 14 : 6 : 6 Aug 30 1930

Committee's Minute

Assigned

See Ind. J.C. 14269

P. Carstensen
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation