

REPORT ON OIL ENGINE MACHINERY.

No. 22296

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Date of writing Report 7.4.37 19 When handed in at Local Office 19 Port of Hamburg

No. in Survey held at Kiel Reg. Book. 88598 on the Steamship "Henry Dundas" Date, First Survey 6.7.36 21.4.36 Last Survey 1.4.37 19 Number of Visits 2

Built at Kiel By whom built Fried. Krupp Germaniawerft Yard No. 667 When built 1927 Engines made at Kiel By whom made Fried. Krupp Germaniawerft A.G. Engine No. 5572 When made 1927 Donkey Boilers made at Kiel By whom made Fried. Krupp Germaniawerft A.G. Boiler No. 3942-4 When made 1927 Brake Horse Power 3600 Owners Oriental Tankers Limited Port belonging to London

Nom. Horse Power as per Rule 912 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Tanker Service 25 9/16 49 3/16

IL ENGINES, &c. Type of Engines Krupp type 65/150 cm, Heavy D.C. 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 650 mm Length of stroke 1250 mm No. of cylinders 8 No. of cranks 8Mean Indicated Pressure 8.4 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1045 mm Is there a bearing between each crank yes

Revolutions per minute 110 Flywheel dia. 2240 mm Weight 5270 kg Means of ignition Diesel syst. Kind of fuel used Diesel oil

Crank Shaft, dia. of journals as per Rule 408 mm as fitted 420 mm Crank pin dia. 430 mm Crank Webs Mid. length breadth semi-Euler shrunk Mid. length thickness 230 mm Thickness parallel to axis 230 mm Thickness around eyehole 188 mm

Flywheel Shaft, diameter as per Rule 408 mm as fitted 420 mm Intermediate Shafts, diameter as per Rule 319 mm as fitted 352 mm Thrust Shaft, diameter at collars as per Rule 346 mm as fitted 420 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 368 mm as fitted 378 mm Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 28 mm as fitted 23 mm Thickness between bushes as per rule 15 mm as fitted 18 mm 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

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 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 shaft no If so, state type

Propeller, dia. 5000 mm Pitch 3940 mm No. of blades 4 Material Bronze whether Movable solid Total Developed Surface 864 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 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 yes

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. 3 main driven for fresh water 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. 1 Diameter 228 mm Stroke 200 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 1 of 225 mm, 2 of 85 mm, 2 of 220 mm, 1 of 105 mm, 1 of 105 mm, 1 of 105 mm How driven main shafting steam steam

Is the cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 of 30 mm

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 3 of 90 mm, 1 of 110 mm, 1 of 110 mm, 1 of 110 mm, 1 of 110 mm, 1 of 110 mm In Holds, etc. 2 of 90 mm, 2 of 90 mm, 2 of 90 mm, 2 of 90 mm, 2 of 90 mm, 2 of 90 mm

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 150 mm

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

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

What pipes pass through the bunkers heating coils How are they protected

What pipes pass through the deep tanks cargo lines 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 mach. aft Is it fitted with a watertight door worked from

If 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. 2 solid injection No. of stages 2 Diameters 150 mm Stroke 1250 mm Driven by

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 150 mm Stroke 1250 mm Driven by Steam engine

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 105 mm Stroke 1250 mm Driven by

Cavenging Air Pumps, No. 4 Diameter 220 mm Stroke 1250 mm Driven by 3 of 5 mm, 1 of 5 mm

Auxiliary Engines crank shafts, diameter as per Rule 90 mm as fitted 90 mm Position Engine room, port side

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 and cleaned *yes*

Is a drain fitted at the lowest part of each receiver *yes*

High Pressure Air Receivers, No. *✓*

Cubic capacity of each *✓*

Internal diameter *✓*

thickness *✓*

Seamless, lap welded or riveted longitudinal joint *✓*

Material *✓*

Range of tensile strength *✓*

Working pressure *✓*

by Rules

Actual

Starting Air Receivers, No. *2*

Total cubic capacity *28 m³*

Internal diameter *1300 mm*

thickness *26 mm*

Seamless, lap welded or riveted longitudinal joint *fusion welded*

Material *0.4 H. Steel*

Range of tensile strength *41-47 1/2*

Working pressure *30 kg/cm²*

by Rules

Actual *25 kg/cm²*

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

Is the donkey boiler intended to be used for domestic purposes only? *no*

PLANS. Are approved plans forwarded herewith for Shafting *6-3-36*

(If not, state date of approval)

Receivers *22-4-36*

Separate Fuel Tanks *17-10-36*

Donkey Boilers *9-3-36*

General Pumping Arrangements *1-4-36*

Pumping Arrangements in Machinery Space *29-8-36*

Oil Fuel Burning Arrangements *17-3-36*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*

State the principal additional spare gear supplied

1 crank throw without journals. 1 set of piston cooling water pipes. 2 top and 2 bottom end brasses. 24 thrust block pins. 1 piston complete with skirt. 2 piston crowns. 2 crosshead lub. oil pumps. 2 main bearing brasses. 1 cylinder liner. 1 cylinder cover without valves. 2 complete Archbold oil pumps. 1 armature with shaft for turning gear.

The foregoing is a correct description,

FRIED. KRUPP
GERMANIAWERKE
Aktiengesellschaft

Manufacturer.

Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits *47*

Dates of Examination of principal parts—Cylinders *1-2-36* Covers *1-9-36* Pistons *1-12-36* Rods *1-12-36* Connecting rods *22-12-36*
Crank shaft *14-3-36* Flywheel shaft *1-4-36* Thrust shaft *14-3-36* Intermediate shafts *22-12-36* Tube shaft *✓*
Screw shaft *22-12-36* Propeller *22-12-36* Stern tube *2-8-36* Engine seatings *fitted on tank top* Engines holding down bolts *22-8-36*
Completion of fitting sea connections *2-1-37* Completion of pumping arrangements *25-2-37* Engines tried under working conditions *1-4-37*
Crank shaft, Material *0.4 H. Steel* Identification Mark *44030's* Flywheel shaft, Material *0.4 H. Steel* Identification Mark *44030's*
Thrust shaft, Material *0.4 H. Steel* Identification Mark *44030's* Intermediate shafts, Material *0.4 H. Steel* Identification Marks *44030's*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *0.4 H. Steel* Identification Mark *1092 H 20-10-36*

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 *yes*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *tanker*

If so, have the requirements of the Rules been complied with *yes*

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *✓*

Is this machinery duplicate of a previous case *yes*

If so, state name of vessel *"Narragansett" with a few exceptions.*

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

This heavy oil engine is constructed under special survey in accordance with the Society's Rules, as well as with the approved plans and instructions thereto. The materials used in the construction are of good quality and the outfit is ample. During the trial trip the machinery has given satisfaction under full working and manoeuvring conditions. In my opinion it is eligible for notation of

+LMC-4.37 (Oil eng) and TS(CL)

The amount of Entry Fee *240 £*

Special ... *£ 1412*

Donkey Boiler Fee ... *£ 304*

Travelling Expenses (if any) *£ 304*

When applied for,

9.4.1937

When received,

14.5.1937

Engine Surveyor to Lloyd's Register of Shipping.

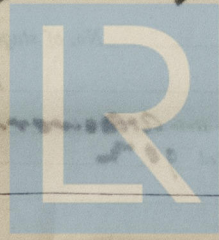
Committee's Minute

Assigned

+ Lmcl H. 37

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