

REPORT ON OIL ENGINE MACHINERY.

No. 27943d

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Date of writing Report 7-3-1939 When handed in at Local Office 19 Port of Rotterdam
 No. in Survey held at Kinderdijk Date, First Survey 20-6-38 Last Survey 1-3-1939
 Reg. Book. Single on the Twin Triple Quadruple Screw vessel motor tanker "B.P. SPIRIT" Number of Visits 9
 Built at Kinderdijk By whom built L. Smit, Leen Yard No. 892 When built 1939
 Engines made at Cologne By whom made Humboldt Deutz A.G. Engine No. 486579/86 When made 1930
 Donkey Boilers made at By whom made Boiler No. When made
 Brake Horse Power 440 Owners Union Lightage Corp. Ltd Port belonging to London
 Nom. Horse Power as per Rule 94 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes
 Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Plain see Smeulder sup. 283. 2 or 4 stroke cycle Single or double acting
 Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks
 Mean Indicated Pressure Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank
 Revolutions per minute 330 Flywheel dia. Weight Means of ignition Compression Kind of fuel used diesel oil
 Crank Shaft, { Solid forged Semi built dia. of journals All built as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eyehole
 Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted 160 mm
 Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 140 mm 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 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 Yes If so, state type Newark patent Length of Bearing in Stern Bush next to and supporting propeller 400 mm
 Propeller, dia. 1600 mm Pitch 1150 mm No. of blades 3 Material bronz whether Moveable solid Total Developed Surface 0.97 m² sq. feet
 Method of reversing Engines by hand Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication forced Thickness of cylinder liners Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material both If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine funnel
 Cooling Water Pumps, No. 2 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. one Diameter 100 mm Stroke 100 mm Can one be overhauled while the other is at work
 Pumps connected to the Main Bilge Line { No. and Size 2 à 60 tons How driven by aux engines }
 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
 Ballast Pumps, No. and size one à 60 t.p.h. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 toothwheel pumps
 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 2 à 2 3/4" and 2 à 2" In Pump Room
 In Holds, &c. Buoyancy spaces, cofferdams, and fore store 1 à 2" connected to pump on deck 15 t.p.h. and driven from aux. engine by belt.
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 à 2 3/4"
 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
 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
 What pipes pass through the bunkers How are they protected
 What pipes pass through the deep tanks 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 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 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. No. of stages Diameters Stroke Driven by
 Auxiliary Air Compressors, No. one No. of stages 2 Diameters 90-110 mm Stroke 85 mm Driven by aux engine
 Small Auxiliary Air Compressors, No. one No. of stages 2 Diameters 45-110 mm Stroke 75 mm Driven by hand
 What provision is made for first Charging the Air Receivers hand compressor
 Scavenging Air Pumps, No. Diameter Stroke Driven by
 Auxiliary Engines crank shafts, diameter as per Rule Smeulder sup. 236 - 7. 222. No. 3 Position one fore and 2 starboard
 Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith sent now



AIR RECEIVERS:—Have they been made under survey *Yes* ✓ State No. of Report or Certificate *Luscauldor report*

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* ✓

Injection 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. *✓* Total cubic capacity *✓* Internal diameter *✓* thickness *✓*

Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *by Rules ✓ Actual ✓*

IS A DONKEY BOILER FITTED? *✓* If so, is a report now forwarded? *✓*

Is the donkey boiler intended to be used for domestic purposes only *✓*

PLANS. Are approved plans forwarded herewith for Shafting *11-11-38* Receivers *✓* Separate Fuel Tanks *10-1-38*

Donkey Boilers *✓* General Pumping Arrangements *20-6-38* Pumping Arrangements in Machinery Space *20-6-38*

Oil Fuel Burning Arrangements *20-6-38*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* ✓

State the principal additional spare gear supplied

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *20-23/6* { During erection on board vessel - - - } *21-23/9 - 16/12-38 12/1 - 20-24/2 - 1/3-39* Total No. of visits *9*

Dates of Examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*

Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *✓*

Screw shaft *23/6-21/9-38* Propeller *16-12-38* Stern tube *16-12-38* Engine seatings *20-2-39* Engines holding down bolts *24-2-39*

Completion of fitting sea connections *12-1-39* Completion of pumping arrangements *1-3-39* Engines tried under working conditions *1-3-39*

Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *S.M. steel* Identification Mark *A.B. 1-11-38* Intermediate shafts, Material *✓* Identification Marks *✓*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S.M. steel* Identification Mark *✓*

Identification Marks on Air Receivers *7: 1520. Lloyd's test No. 2309 60 Atm. W.P. 30 ATM. H.K. 116-38 R.S. 7-6-38*

20-340. Lloyd's test 70 Atm. W.P. 35 Atm. M.P. 29-10-38.

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

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 *Shell spirit I & II.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been made and fitted in accordance with the approved plans, Secretary's letters and Society's Rules. Main and aux. engines and centrifugal pumps have been tested under full working condition and was found working and manoeuvring satisfactorily and in my opinion eligible for the record of + R.M.C. 3-39. Oil engines. O.G.*

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 .. £ *on Luscauldor report.* : When applied for, *8. 3. 19. 39.*
Special £ : :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ *13.00.* : *24. 3. 19. 39/24/3*

Committee's Minute *TUE. 14 MAR 1939*
Assigned *+ LMC 3.39 Oil Eng O.G.*

W. H. Bouice
Engineer Surveyor to Lloyd's Register of Shipping.

