

REPORT ON OIL ENGINE MACHINERY.

30 JUN 1926

Rpt. 4b

Date of writing Report 28 Feb. 1926. When handed in at Local Office 28 Feb. 1926. Port of Winterthur. No. in Survey held at Winterthur. Date, First Survey 25 Jan. 24 Last Survey 27 Feb. 1925. Number of Visits. Tons Gross 223 Net 104. Built at Winterthur. By whom built Messrs. Sulzer, Bros. Engine No. 14086 When made 1925. Brake Horse Power 250. Owners. Port belonging to. Nom. Horse Power as per Rule 71.5. Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted.

ENGINES, &c.—Type of Engines Airless Inj. Internal Combustion Engines or 4 stroke cycle 2. Single or double acting single. Maximum pressure in cylinders 35 at. No. of cylinders 4. Diameter of cylinders 310 mm. No. of cranks 4. Length of stroke 420 mm. Mean of bearings, adjacent to the Crank, measured from inner edge to inner edge 360 mm. Is there a bearing between each crank yes. Revolutions per minute 275 to 300. Flywheel dia. 1000 mm. Weight 1000 kg. Means of ignition Compression. Kind of fuel used Heavy fuel oil. Crank Shaft, dia. of journals as per Rule 160.5 mm as fitted 175 mm. Crank pin dia. 175 mm. Crank Webs Mid. length breadth 240 mm Mid. length thickness 98 mm. Thickness parallel to axis shrunk. Thickness around eye-hole solid. Flywheel Shafts, diameter as per Rule 160.5 mm as fitted 175 mm. Intermediate Shafts, diameter as per Rule 105.13 mm as fitted. Thrust Shaft, diameter at collars as per Rule 110.4 mm as fitted 140 mm. Tube Shafts, diameter as per Rule. Screw Shaft, diameter as per Rule. Is the tube shaft fitted with a continuous liner.

Bronze Liners, thickness in way of bushes as per Rule. Thickness between bushes as per rule. 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. 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. 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. Length of Bearing in Stern Bush next to and supporting propeller.

Propeller, dia. Pitch No. of blades Material whether Movable Total Developed Surface 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. Thickness of cylinder liners 25 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 siphoned back to the engine. Cooling Water Pumps, No. 1. S.A. 125 mm dia x 50 mm stroke. Is the sea suction provided with an efficient strainer which can be cleared within the vessel. Bilge Pumps fitted to the Main Engines, No. 1. S.A. Diameter 125 mm Stroke 50 mm. Can one be overhauled while the other is at work.

Pumps connected to the Main Bilge Line. No. and Size. How driven. Lubricating Oil Pumps, including Spare Pump, No. and size driven from crank shaft. 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 Engine and Boiler Room. Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size. All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes. Are the Bilge Suctions in the Machinery Space from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. All Sea Connections fitted direct on the skin of the ship. Are they fitted with Valves or Cocks. 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. 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. All pipes pass through the bunkers. How are they protected. All pipes pass through the deep tanks. Have they been tested as per Rule. All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times. 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. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from. On wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork.

Air Compressors, No. No. of stages Diameters Stroke Driven by. Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by. All Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by. Ventilating Air Pumps, No. 1 double acting Diameter 500 mm dia. Stroke 420 mm. Driven by Crank shaft. Auxiliary Engines crank shafts, diameter as per Rule as fitted.

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule. The internal surfaces of the receivers be examined. What means are provided for cleaning their inner surfaces. Are there a drain arrangement fitted at the lowest part of each receiver. Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness. Material Range of tensile strength Working pressure by Rules. Ventilating Air Receivers, No. Total cubic capacity Internal diameter thickness. Material Range of tensile strength Working pressure by Rules.



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	29.8.24.	35 lbs	75 lbs	R	Tests satisfactory
" " COVERS	21.8.24.	" "	" "	"	" "
" " JACKETS	29.8.24 + 21.8.24.	1 "	6 "	"	" "
" " PISTON WATER PASSAGES	4.9.24.	2 "	" "	"	" "
MAIN COMPRESSORS—1st STAGE					
" " 2nd "					
" " 3rd "					
AIR RECEIVERS—STARTING					
" " INJECTION					
AIR PIPES	30.1.25	30 lbs. →	60 lbs.	R.	Tests satisfactory
FUEL PIPES	"	100 "	200 "	"	" "
FUEL PUMPS & VALVES	1.9.24.	" "	" "	"	" "
SILENCER					
" " WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for Shafting 9.5.24. Receivers Separate Tanks
 (If not, state date of approval)
 Donkey Boilers General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR

The foregoing is a correct description.

W. G. Gallis
 Manufacturer.

Dates of Survey while building: During progress of work in shops - 25.1.24, 7.2.24, 9.4.24, 12.5.24, 19.5.24, 5.6.24, 16.7.24, 7.8.24, 8.8.24, 13.8.24, 21.8.24, 29.8.24, 1.9.24, 2.9.24, 4.9.24, 15.12.24, 30.1.25
 During erection on board vessel - 23.2.25, 27.2.25.
 Total No. of visits

Dates of Examination of principal parts—Cylinders 27.2.25 Covers 27.2.25 Pistons 27.2.25 Rods ✓ Connecting rods 27.2.25
 Crank shaft 27.2.25 Flywheel shaft 27.2.25 Thrust shaft 27.2.25 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 Ann. S.M. Eng. Stl. Identification Mark Eng. N° 14086, 6887, Lloyd's
 Flywheel shaft, Material Ann. S.M. Eng. Stl. Identification Mark N° 136, R. 5-6-24, Lloyd's
 Thrust shaft, Material Ann. S.M. Eng. Stl. Identification Mark Eng. N° 14086, 6498, Lloyd's
 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.

Is this machinery duplicate of a previous case Yes. If so, state name of vessel Eng. N° 14082.
 General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under special survey, in accordance with the requirements of the Rules, the Secretary's letters and the approved plans. Materials and workmanship good. Full power trial of Engine in shop satisfactory. This Engine is to be put in stock.

The amount of Entry Fee ... £ 2 - 0 - 0 : When applied for,
 Special ... £ 17 - 17 - 6 : 28th Feb. 19 25
 Donkey Boiler Fee ... : : When received,
 Travelling Expenses (if any) ... : : 3rd March 19 25.

Committee's Minute GLASGOW 29 JUN 1926
 Assigned See Gls. Rpt. No. 45771

W. G. Gallis
 Engineer Surveyor to Lloyd's Register of Shipping.

© 2019 Lloyd's Register Foundation

M 26-6-26

The Surveys are requested not to write on or below the space for Committee's Minute.