

REPORT ON OIL ENGINE MACHINERY.

No. 106

13 AUG 1930

Received at London Office

Date of writing Report

8th Aug. 1930

When handed in at Local Office

8th Aug. 1930

Port of Winterthur

No. in Survey held at Reg. Book.

Winterthur

Date, First Survey 12th Dec., 1929

Last Survey 26th July, 1930

Number of Visits

on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel

Tons ^{Gross} _{Net}

Built at Memel By whom built Messrs. Lindenau & Co. Yard No. 53 When built 1930
 Engines made at Winterthur By whom made Messrs. Sulzer Bros. Engine No. 16967 When made 1930
 Donkey Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
 Brake Horse Power 600 Owners _____ Port belonging to _____
 Nom. Horse Power as per Rule 212 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____
 Trade for which vessel is intended _____

OIL ENGINES, &c.—Type of Engines Sulzer Airless injection Oil Engine 2 or 4 stroke cycle 2 Single or double acting single
 Maximum pressure in cylinders 600 lbs Diameter of cylinders 360 mm. Length of stroke 460 mm. No. of cylinders 6 No. of cranks 6
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 386 mm. Is there a bearing between each crank yes
 Revolutions per minute 300 Flywheel dia. 1100 mm. Weight 440 Kg. Means of ignition Temperature due to compression Kind of fuel used heavy fuel oil

Crank Shaft, dia. of journals as per Rule 191.2 mm. as fitted 200 Crank pin dia. 200 mm. Crank Webs Mid. length breadth 300 mm. Mid. length thickness 105 Thickness parallel to axis shrunk Thickness around eye-hole ✓
Flywheel Shaft, diameter as per Rule 191.2 as fitted 220 Intermediate Shafts, diameter as per Rule _____ as fitted _____ Thrust Shaft, diameter at collars as per Rule 191.2 mm. as fitted 220

Tube 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 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 _____

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 de-coupled yes Means of lubrication forced
 Thickness of cylinder liners 32 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. 1 D.A. 95 mm. 6 x 160 mm stroke Is the sea suction provided with an efficient strainer which can be cleared within the vessel _____
Bilge Pumps worked from the Main Engines, No. 1 D.A. Diameter 95 mm. Stroke 160 mm. 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 1 Gear wheel pump 18 m³ per hr.
 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 _____

In 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 led 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 _____

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 _____

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 _____ 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. 1 No. of stages 2 Diameters 130 | 120 Stroke 180 mm Driven by Crank shaft
Auxiliary Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____
Small Auxiliary Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____

Scavenging Air Pumps, No. Under side of working pistons Diameter 360 mm. Stroke 460 mm. Driven by crank shaft
Auxiliary Engines crank shafts, diameter as per Rule 80 mm. as fitted 74.6 80 mm. as fitted 72

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule _____
 Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces 500 litres per hole 125 mm diameter
 Is there a drain arrangement fitted at the lowest part of each receiver _____

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 _____
Starting Air Receivers, No. 5 Total cubic capacity 2500 litres Internal diameter 470 mm. thickness 15 mm.
 Seamless, lap welded or riveted longitudinal joint Lap welded Material S.M. Steel Range of tensile strength 35 to 41 kg/mm² Working pressure by Rules 486 lbs

005529-005536-0118

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting 25-1-30, 19-2-30 Receivers 17-4-30 Separate Tanks

Donkey Boilers _____ General Pumping Arrangements _____ Oil Fuel Burning Arrangements _____

SPARE GEAR

The foregoing is a correct description of the _____

Handwritten signature: P. H. H. H.

Manufacturer.

Dates of Survey while building
 During progress of work in shops - - 12-12-29, 24-12-29, 27-12-29, 6-1-30, 24-1-30, 28-1-30, 8-3-30, 25-3-30, 24-4-30, 26-4-30, 2-5-30, 12-5-30, 14-5-30, 20-5-30, 26-5-30, 2-6-30, 12-6-30, 13-6-30, 20-6-30, 27-6-30, 4-7-30, 7-7-30, 11-7-30, 14-7-30
 During erection on board vessel - - 16-7-30, 17-7-30, 26-7-30
 Total No. of visits _____

Dates of Examination of principal parts—Cylinders 16-7-30 Covers 16-7-30 Pistons 16-7-30 Rods 16-7-30 Connecting rods 16-7-30

Crank shaft 17-7-30 Flywheel shaft 17-7-30 Thrust shaft 17-7-30 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. Steel Identification Mark J. A. 3655 Flywheel shaft, Material see crankshaft Identification Mark see crankshaft

Thrust shaft, Material see crankshaft Identification Mark see crankshaft 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 no If so, state name of vessel ✓

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 trials of Engine in shop satisfactory.)

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 ...	£ 4-0-0 :	When applied for, 31 st July 1930
Special ...	£ 53-0-0 :	
Donkey Boiler Fee ...	£ : :	When received, 2 nd Aug. 1930
Travelling Expenses (if any) £	: :	

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

Committee's Minute **FRI, 12 JUL 1935**

Assigned See Ham. 21161

