

REPORT ON OIL ENGINE MACHINERY.

No. 75

Date of writing Report 16th Nov. 1927. When handed in at Local Office 16th Nov. 1927. Port of Winterthur

23 JAN 1928

No. in Survey held at Winterthur Date, First Survey 14.12.26 Last Survey 25-10 1927.

Reg. Book. Single on the Twin Screw vessels

Built at Helburn By whom built Messrs. Palmers S.B. & L. Co. Ltd. Yard No. 969 When built 1927

Engines made at Winterthur By whom made Messrs. Sulzer Bros. Engine No. 5676 When made 1927.

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 2700 Owners Messrs. Tankers. Ltd. Port belonging to London.

Nom. Horse Power as per Rule 748. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c. Type of Engines Sulzer Diesel Engine 2 or 4 stroke cycle 2 Single or double acting single

Mean pressure in cylinders 550 lbs. No. of cylinders 6 Diameter of cylinders 680 mm. No. of cranks 6 Length of stroke 1200 mm.

of bearings, adjacent to the Crank, measured from inner edge to inner edge 880 mm. Is there a bearing between each crank Yes.

Revolutions per minute 100 Flywheel dia. 2200 mm. Weight 4300 Kg. Means of ignition Compression Kind of fuel used Heavy fuel oil.

Shaft, dia. of journals as per Rule 442 mm. Crank pin dia. 470 mm. Crank Webs Mid. length breadth 620 mm. Thickness parallel to axis

as fitted 470 " Mid. length thickness 255 " shrunk Thickness around eye hole

eel Shafts, diameter as per Rule 442 " Intermediate Shafts, diameter as per Rule 343 mm. Thrust Shaft, diameter at collars as per Rule 360 mm.

as fitted 470 " as fitted 13 " as fitted 470 "

Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner

as fitted Thickness between bushes as per rule Is the after end of the liner made watertight in the

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

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

liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland or other appliance fitted at the after

the tube shaft Length of Bearing in Stern Bush next to and supporting propeller

ler, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine Is Means of lubrication

Thickness of cylinder liners 53 mm. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

insulating 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

Water Pumps, No. 2 Combined Cylinder & Piston Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Pumps fitted to the Main Engines, No. 1 D.A. Diameter 190 mm Stroke 150 mm. Can one be overhauled while the other is at work

connected to the Main Bilge Line No. and Size (2 Ans) (1 of main Eng) How driven (Steam) (Lever)

Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size 2 Combined gear pumps for bearing & crosshead lubrication

independent means arranged for circulating water through the Oil Cooler Yes, 1 dec Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Engine and Boiler Room 203 124

s, &c.

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

the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes. Yes Are the Bilge Suctions in the Machinery Space

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

sea Connections fitted direct on the skin of the ship. Yes Are they fitted with Valves or Cocks. Ball

ized 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

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

es pass through the bunkers none How are they protected.

es pass through the deep tanks Have they been tested as per Rule

pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times. Yes

angement 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

out to another Is the Shaft Tunnel watertight none Is it fitted with a watertight door none worked from

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

Compressors, No. 1 No. of stages 3 Diameters 570/480/150 Stroke 600 mm. Driven by Crank shaft.

y Air Compressors, No. 1 No. of stages 3 Diameters Stroke Driven by Steam

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

ing Air Pumps, No. 2 D.A. in Tandem Diameter 1400 mm. Stroke 750 mm. Driven by Crank shaft.

y Engines crank shafts, diameter as per Rule 146 mm. as fitted 160 -

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

ternal surfaces of the receivers be examined Yes. What means are provided for cleaning their inner surfaces

drain arrangement fitted at the lowest part of each receiver Yes 800 litres

Pressure Air Receivers, No. Starting Injection 8 Cubic capacity of each 150 " Internal diameter 540 mm. thickness 25 mm

lap welded or riveted longitudinal joint Seamless. Material S.M. Steel Range of tensile strength 28 T. 32 T. Working pressure by Rules 97.7 Kg. cm²Air Receivers, No. 1 Total cubic capacity 8.5 m³ Internal diameter 1200 mm. thickness 21 mm.Seamless, lap welded or riveted longitudinal joint riveted Material S.M. Steel Range of tensile strength 26-32 T. Working pressure by Rules 31. Kg. cm²

26-30 " end plates

If so, is a report now forwarded?

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	13-4-27, 14-4-27.	38.5 Kg.cm ²	80Kg.cm ²	R.	Test satisfactory
" " COVERS	" "	" "	" "	R.	" "
" " JACKETS.....	" "	0.75 "	6 "	R.	" "
" * PISTON WATER PASSAGES.....	30-6-27.	2.0 "	" "	R.	" "
MAIN COMPRESSORS—1st STAGE.....	9-5-27.	3.0 "	20 "	R.	" "
" 2nd "	" "	15.0 "	50 "	R.	" "
" 3rd "	" "	75.0 "	150 "	R.	" "
AIR RECEIVERS—STARTING	H.P. 23-12-24 " 25-8-27. L.P. 21-10-27	1070 LBS." " 427 "	2140 LBS." " 627 "	J.L.G.F.K W.G.V	Tested by Düsseldorf Test satisfactory
" INJECTION	29-10-25	1065 "	2130 "	H.J.	Tested by Düsseldorf Test satisfactory
AIR PIPES	28-6-27, 29-7-27, 19-8-27, 25-8-27.	75 Kg. cm ²	150 Kg. cm ²	R	Test satisfactory
FUEL PIPES	29-7-27, 19-8-27 25-8-27	" "	" "	R	" "
FUEL PUMPS & VALVES	11-4-27, 4-5-27.	" "	" "	R	" "
SILENCER	7-9-27.	0.05 "	2.5 "	R	" "
" WATER JACKET					
SEPARATE FUEL TANKS					

7-5-27 L.P. riveted receivers
 Receivers 2-5-27 800 lbs. H.P. recs Separate Tanks
 7-6-20 150 " 500 " "
 Oil Fuel Burning Arrangements

The foregoing is a correct description.

Manufacturer

Dates of Survey while building	During progress of work in shops--	14-12-26, 21-12-26, 3-1-27, 13-1-27, 4-2-27, 21-2-27, 22-2-27, 11-3-27, 1-4-27, 6-4-27, 11-4-27, 13-4-27, 14-4-27
		2-5-27, 4-5-27, 9-5-27, 17-5-27, 10-6-27, 15-6-27, 20-6-27, 28-6-27, 30-6-27, 6-7-27, 26-7-27, 29-7-27, 10-8-27
	During erection on board vessel---	25-8-27, 30-8-27, 7-9-27, 13-9-27, 15-9-27, 16-9-27, 20-9-27, 23-9-27, 28-9-27, 30-9-27, 4-10-27, 12-10-27, 14-10-27
		Total No. of visits

Dates of Examination of principal parts—Cylinders 28-9-27 Covers 23-9-27 Pistons 23-9-27 Rods 23-9-27 Connecting rods 28-9-27
Crank shaft 30-9-27 Flywheel shaft 30-9-27 Thrust shaft 30-9-27 Intermediate shafts Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Crank shaft, Material Ann. S.M. Inq. Steel Identification Mark " J.L.269027-527 Flywheel shaft, Material Ann. S.M. Inq. Steel Identification Mark LLOYD'S J.Q.10

Thrust shaft, Material *see fly wheel shaft* Identification Marks *see fly wheel shaft* 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.

The amount of Entry Fee ...	£	6 - 0 - 0	When applied for,
Special ...	£	112 - 8 - 0	31 st Oct. 1927
Donkey Boiler Fee ...	£	:	When received,
Travelling Expenses (if any) £	:	:	2 nd Nov. 1927

Committee's Minute

Assigned

TUES. 31 JAN 1928

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See New P.B. up to 82273

W.G. Vallis

Engineer Surveyor to Lloyd's Register of Shipping