

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 1533.

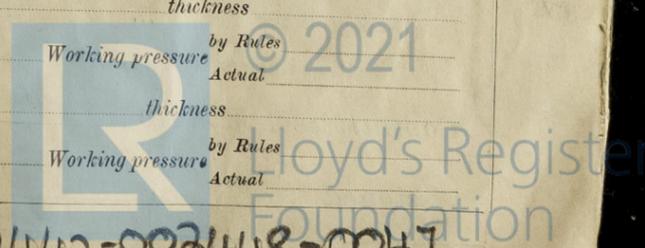
Date of writing Report 8th March 33 When handed in at Local Office 9th March 33 Port of Bremen Received at London Office 15 MAR 1933
 No. in Survey held at Hamburg Date, First Survey 4th February 32 Last Survey 8th March 19 33
 Reg. Book. Number of Visits 110

parts
 Single }
 on the Twin } Screw vessel
 Triple }
 Quadruple }
 Tons { Gross
 Net
 Built at Hamburg By whom built Deutsche Werft A.G. Yard No. 149 When built 1932/33
 Engines made at Hamburg By whom made M.A.N. Engine No. 330620/630 When made 1932/33
 Donkey Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
 Brake Horse Power 2 x 2250 Owners Standard Oil Co. Port belonging to _____
 Nom. Horse Power as per Rule 783 each Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____
 Trade for which vessel is intended _____

OIL ENGINES, &c.—Type of Engines 2 1/2 in 60/90 2 or 4 stroke cycle 2 Single or double acting double
 Maximum pressure in cylinders 45 atm Diameter of cylinders 600 mm Length of stroke 900 mm No. of cylinders 4 x 2 No. of cranks 4
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 852 mm Is there a bearing between each crank yes
 Revolutions per minute 118 Flywheel dia. 2100 mm Weight 7500 kg Means of ignition air in inj. Kind of fuel used _____
 Crank Shaft, dia. of journals as per Rule _____ as fitted 390 mm Crank pin dia. 390 mm Crank Webs Mid. length breadth 640 mm Thickness parallel to axis 177.5 mm
 Mid. length thickness 240 mm shrunk Thickness around eye-hole 240 mm
 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 _____
 Tube Shaft, diameter as per Rule _____ as fitted _____ Screw Shaft, diameter as per Rule _____ as fitted _____ Is the { tube } shaft fitted with a continuous liner { screw }
 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 _____ If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller _____
 Propeller, dia. _____ Pitch _____ No. of blades _____ Material _____ whether Moveable _____ Total Developed Surface _____ sq. feet
 Method of reversing Engines directly by Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced
 Thickness of cylinder liners 4.5 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged 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. _____ Is the sea suction provided with an efficient strainer which can be cleared within the vessel _____
 Bilge Pumps worked from the Main Engines, No. _____ Diameter _____ Stroke _____ 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, each engine, 20 cbr/h
 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 Pump Room _____
 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. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____
 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. 1, each engine Diameter 2 x 1080 mm Stroke 760 mm Driven by main engine
 Auxiliary Engines crank shafts, diameter as per Rule _____ No. — _____ as fitted _____ Position — _____

AIR 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 and cleaned _____ Is a drain 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 _____ 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 _____

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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 *yes (Report 1424)* Receivers Separate Tanks
(If not, state date of approval)

Donkey Boilers General Pumping Arrangements Oil Fuel Burning Arrangements

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.
Maschinenfabrik Augsburg-Nürnberg A.-G.

W. Mannheim Manufacturer.

Dates of Survey while building
 During progress of work in shops - 4.24.25 Feb. 1932; 3.4.17.18 March; 11.14.22.23.24.25 June; 7.11.22.25 July; 2. August; 1.2. Sept; 15-19. 21-22 Nov
 During erection on board vessel - 28-30 November; 1-3, 5-10, 12-17, 19-24, 27-31 Decem. 2-5, 9-14, 16-21, 23-28, 30, 31 Jan. 1932; 2-4, 6-11, 13-18 Feb; 20, 23-25, 28 February; 1-4, 6-8 March.
 Total No. of visits

Dates of Examination of principal parts—Cylinders	24.2.32	19.11.32	3.5.22.28.31. 29.32	Pistons	7.27. 28.32	Rods	27.12.32	Connecting rods	22.7.32
liners	25.6.32	24.12.32	2.3.5.9.10.16. 27.1.33						
Crank shafts	20.24. 27.32	Flywheel shaft 22.6.32	Thrust shaft	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 shafts Material	S.M. Steel	Identification Mark	LLOYD'S F.S. 1530/31/32/33 15.21. 3.32	Flywheel shaft, Material		Identification Mark			
Thrust shaft, Material		Identification Mark		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.
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with
 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 *Deutsche Werft 148, Report 1424*

General Remarks (State quality of workmanship, opinions as to class, &c.)
*These heavy oil engines have been constructed in accordance with the Soc. Rules and Regulations as well as with the approved plans and instructions thereto. The materials used in the construction are good and the workmanship is satisfactory.
 In my opinion the vessel for which these engines are intended will be eligible for the notation of + LMC [with date] when the whole machinery has been fitted on board and tried under full working conditions.*

The consent of the owners has been obtained to employ the following engine parts not tested by a classification Society:— 3 connecting rods, 3 crossheads, 3 telescopic pipe supports, 6 cross-head bearings, 3 guide shoes. See London Letter 27.7.32 and Letter Haried Taubkoff Sheederi 31.8.32.
 A copy of this report has been sent to the Bamberg surveyors

The amount of Entry Fee	1/5	£ 4 : 16p	When applied for, to be charged on completion of vessel.
Special	4/5	£ 11 : 6p	
Donkey Boiler Fee		£ :	When received.
Travelling Expenses (if any)		£ 23 : 1/7	

H. J. Brauer
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned
 31 OCT 1932
See F. G. Rep.



To answer to the Rep. 9/11/32 25/11/32
 certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)