

REPORT ON OIL ENGINE MACHINERY.

No. 2130.

JUN 19 1939

Received at London Office.

Date of writing Report 16th June 1939 When handed in at Local Office 19 Port of BREMEN
 No. in Survey held at BREMEN Date, First Survey 25th April 1938 Last Survey 7th June 1939
 Reg. Book. 88670 on the Single Screw vessel JAVA Tons {Gross 9250
Triple { Net 5646
Quadruple }
 Built at BREMEN By whom built DEUTSCHE SCHIFF UND MASCHINENBAU A.G. WERK: A.G. WESER Yard No. 951 When built 1939
 Engines made at BREMEN By whom made DEUTSCHE SCHIFF UND MASCHINENBAU A.G. WERK: A.G. WESER Engine No. 162/163 When made 1939
 Donkey Boilers made at BREMEN & VEGESACK By whom made A.G. WESER & BREMER VULKAN Boiler No. 1835/875/876 When made 1939
 Brake Horse Power 2 x 4200 Owners STOOMVAART MAATSCHAPPY "NEDERLAND" Port belonging to AMSTERDAM
 Nom. Horse Power as per Rule 2144 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended OPEN SEA SERVICE

OIL ENGINES, &c. — Type of Engines TWO MAIN OIL ENGINES. TYPE: WESER/M.A.N. D72U 53/76. SINGLE RED. GEARED IN A SHAFT 2 or 4 stroke cycle 2 Single or double acting DOUBLE

Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 530 mm Length of stroke 760 mm No. of cylinders 2 x 7 No. of cranks 2 x 7
 Mean Indicated Pressure 5 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 700 mm Is there a bearing between each crank yes
 Revolutions per minute 215/84 Flywheel dia. 2915/16 Weight 2078 Means of ignition DIESEL PRINCIPLE Kind of fuel used Heavy oil
 Crank Shaft, { Solid forged dia. of journals as per Rule as appx. Crank pin dia. 420 mm Crank Webs Mid. length breadth 550 mm Thickness parallel to axis shrunk
 { Semi built as fitted 440 mm Mid. length thickness 200 mm Thickness around eye-hole shrunk
 { All built as fitted 440 mm }
 Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 464 mm Thrust Shaft, diameter at collars as per Rule as fitted 500 mm
 Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 514 mm Is the { tube screw } shaft fitted with a continuous liner { yes }

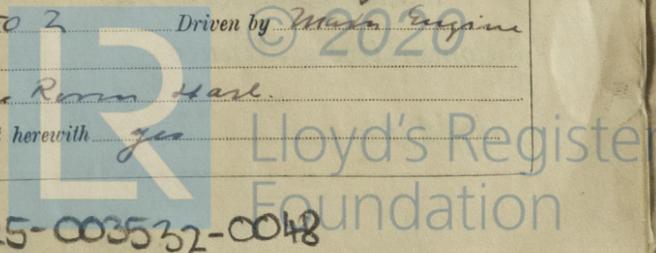
Bronze Liners, thickness in way of bushes as per Rule 24 Thickness between bushes as per Rule 18 Is the after end of the liner made watertight in the propeller boss yes
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length
 the liner 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 fit tightly
 two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube no
 shaft no If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 2560 mm

Propeller, dia. 6500 mm Pitch 6557 mm No. of blades 4 Material bronze whether Moveable no Total Developed Surface 12.83 sq. feet
 Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced
 Thickness of cylinder liners 35 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 no
 Cooling Water Pumps, No. 2 each 600 m³/h 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. no Diameter no Stroke no Can one be overhauled while the other is at work no
 Pumps connected to the Main Bilge Line { No. and Size one rotary self priming bilge pump, one rotary self priming ballast pump
 How driven 115 m³/h. elec. driven 115 m³/h. elec. driven }

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 no
 Ballast Pumps, No. and size one 115 m³/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3, each 140 m³/h
 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 of 125, 2 of 90, 1 of 70 from Cofferdam In Pump Room 1 of 90, 1 of 70, 1 of 70
 In Holds, &c. 12 of 90, 4 of 90, 1 of 90 each supply cargo tank 1 of 70, Pipe Tunnel 1 of 90, Cargo Room 1 of 90, 1 of 90

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 140 from Ballast Pump, 1 of 225 from Cooling Water Pump
 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 & cocks
 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 yes
 What pipes pass through the bunkers none How are they protected no
 What pipes pass through the deep tanks none Have they been tested as per Rule no

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 yes Is it fitted with a watertight door yes worked from Engine Room top
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork no
 Main Air Compressors, No. none No. of stages no Diameters no Stroke no Driven by no
 Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 265/105 Stroke 240 mm Driven by Elect. Motor
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 100/35 Stroke 80 mm Driven by Hand Oil Eng.
 What provision is made for first Charging the Air Receivers The small aux. air compr. is for hand charging arranged
 Scavenging Air Pumps, No. one for each engine Diameter 1250 mm Stroke 650 mm Driven by Main Engine
 Auxiliary Engines crank shafts, diameter as per Rule as appx. 25.8 mm No. 3 Position Engine Room Head
 as fitted 170 mm Have the Auxiliary Engines been constructed under special survey yes in Augsburg Is a report sent herewith yes



003525-003532-0048

AIR RECEIVERS:—Have they been made under survey *yes* Are reports or certificates now forwarded *yes*
 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*
STARTING INJECTION AIR RECEIVERS, No. *4* Cubic capacity of each *4.5 m³* Internal diameter *1195 mm* thickness *27.5 mm*
 Seamless, lap welded or riveted longitudinal joint *lap welded* Material *P.M. Steel* Range of tensile strength *38-44 kg/cm²* Working pressure *30 kg/cm²*
Starting Air Receivers, No. *1* Total cubic capacity *275 cts* Internal diameter *416 mm* thickness *12 mm*
 Seamless, lap welded or riveted longitudinal joint *seamless* Material *P.M. Steel* Range of tensile strength *45-55 kg/cm²* Working pressure *30 kg/cm²*

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes*
 Is the donkey boiler intended to be used for domestic purposes only *no*
PLANS. Are approved plans forwarded herewith for Shafting *yes* Receivers *yes* Separate Fuel Tanks *yes*
 Donkey Boilers *yes* General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *yes*
 Oil Fuel Burning Arrangements *yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*
 State the principal additional spare gear supplied *Main Engine 1 piston exempl. with rod, 1 upper & 1 lower cylinder cover, 4 telescoping cooling pipes, 1 upper & 1 lower cylinder liner, 1 upper & 1 lower fuel pump exempl., 1 upper & 1 lower fuel pump cam, 56 fuel pump pressure pipes.*
Pumps: for each type of rotary pumps 1 shaft with impeller wheel and 1 set of ball bearings, for each type of tooth wheel pumps a set of wheels & bearings

The foregoing is a correct description,
 Deutsche Schiff- und Maschinenbau Aktiengesellschaft
 "Weser" Manufacturer.

Dates of Survey while building
 During progress of work in shops: 1938 Apr. 25, Jun. 14, 17, July 7, 14, Aug. 2, 9, 17, Sept. 2, 10, 17, Oct. 15, 22, Nov. 4, 5, 7, 15, 23, Dec. 1, 7, 12, 14, 21, 28, 30.
 1939 Jan. 3, 6, 9, 12, 16, 21, 23, 26, 30, Feb. 1, 4, 6, 14, 15, 18, 22, 24, 27, 28, March 1, 3, 7, 8, 10, 14, 16, 20, 22, 23, 24, 28, 31.
 During erection on board vessel: 1939 Apr. 4, 5, 11, 13, 15, 18, 21, 25, 26, 28, May 3, 6, 10, 12, 15, 17, 19, 22, 23, 24, 27, 30, June 1, 2, 3, 5, 6, 7.
 Total No. of visits *85*

Dates of Examination of principal parts—Cylinders *23.12.38* Covers *11.38* Pistons *22.7.39* Rods *27/28.12.22.1.39* Connecting rods *27.2.39*
 Crank shaft *12.1.39* Flywheel shaft *—* Thrust shaft *31.3.39* Intermediate shafts *23.1.39* Tube shaft *—*
 Screw shafts *7.3.39* Propeller *2.1.39* Stern tube *10.3.39* Engine seatings *20.3.39* Engines holding down bolts *12.5.39*
 Completion of fitting sea connections *28.3.39* Completion of pumping arrangements *6.6.39* Engines tried under working conditions *7.6.39*
 Crank shaft, Material *P.M. Steel* Identification Mark *LLOYD'S 2594/5 L.S. 29.12.38* Flywheel shaft, Material *—* Identification Mark *M.B. 14178 19.12.38*
 Thrust shaft, Material *S.M. Steel* Identification Mark *LLOYD'S H.K. 1200 26.2.38* Intermediate shafts, Material *S.M. Steel* Identification Mark *LLOYD'S 14173 1.11.38*
 Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *P.M. Steel* Identification Mark *LLOYD'S 14154/5 22.11.38*
 Identification Mark *M.B. 3542 29.1.39*
 Identification Mark *M.B. 14076 8.8.39*

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 *yes* If so, have the requirements of the Rules been complied with *yes*
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *not*
 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 built under Special Survey in accordance with the approved plans, the Port Captain's letters, and in conformity with the requirements of the Rules. The engine cylinders, covers, pistons & rods have been built in the Augsburg district under the supervision of the Augsburg Surveyors. The materials used in the construction are made at works recognized by the Committee and tested as per Rule. The workmanship is of good quality. During the vessel's trial trip all the machinery has been tested under full working and manoeuvring conditions and found satisfactory in all respects. This machinery is eligible in my opinion to be classed in the Loc. Reg. Book with records of * LMC 6.39. OIL ENGINES; TAIL SHAFT C.L.*

The amount of Entry Fee .. RM 120.- : When applied for,
 Special *incl. reduction* £ 33.38.- : 17.6.1939.
 Donkey Boiler Fee £ 1.14.- : When received,
 Travelling Expenses (if any) £ .95.- : 20/7.1939.

A. Cantenun
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 30 JUN 1939 / MK 25/7*
 Assigned *+ LMC 6.39 Oil Eng*
DB 7/11 200 (WT) 85 lb
CL



Certificate (if required) to be sent to Bremen Office

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