

## REPORT ON OIL ENGINE MACHINERY.

No. 2130.

JUN 19 1939

Received at London Office

Date of writing Report 16<sup>th</sup> June 1939 When handed in at Local Office 10 Port of BREMEN  
No. in Survey held at BREMEN Date, First Survey 25<sup>th</sup> April 1938 Last Survey 7<sup>th</sup> June 1939  
Reg. Book. 88670 on the Single Twin Triple Quadruple Screw vessel JAVA Tons Gross 9250 Net 5646  
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. 1835/876 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/cm<sup>2</sup> Diameter of cylinders 530 mm Length of stroke 760 mm No. of cylinders 2 x 3 No. of cranks 2 x 3

Mean Indicated Pressure 5 kg/cm<sup>2</sup> 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. — Weight — Means of ignition DIESEL PRINCIPLE Kind of fuel used Heavy oil

Crank Shaft, Solid forged dia. of journals as per Rule 440 mm Crank pin dia. 420 mm Crank Webs Mid. length breadth 550 mm Thickness parallel to axis shrunk Thickness around eyehole —

Flywheel Shaft, diameter as per Rule 500 mm Intermediate Shafts, diameter as per Rule 464 mm Thrust Shaft, diameter at collars as per Rule 500 mm

Tube Shaft, diameter as per Rule 514 mm Screw Shaft, diameter as per Rule 514 mm Is the tube 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 yes

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 no If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 2560 mm

Propeller, dia. 6500 mm Pitch 6500 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 m<sup>3</sup>/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. — Diameter — Stroke — Can one be overhauled while the other is at work —

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 m<sup>3</sup>/h. electric driven 115 m<sup>3</sup>/h. electric 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

Ballast Pumps, No. and size one 115 m<sup>3</sup>/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3, each 140 m<sup>3</sup>/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 mm, 2 of 90 mm, 1 of 70 mm from Cofferdam

In Holds, &c. 12 of 90, 4 of 70, 2 of 90, 1 of 70, 1 of 90, 1 of 70, 1 of 90, 1 of 70, 1 of 90, 1 of 70, 1 of 90, 1 of 70

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 140 mm from Ballast Pump, 1 of 225 mm 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 —

What pipes pass through the deep tanks none 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 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 —

Main Air Compressors, No. none No. of stages — Diameters — Stroke — Driven by —

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, unsuited

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 25.8.17 No. 3 Position Engine Room Head

Have the Auxiliary Engines been constructed under special survey yes in Amsterdam Is a report sent herewith yes



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 m<sup>3</sup>* 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/cm<sup>2</sup>* Working pressure *30 kg/cm<sup>2</sup>*  
for AUX Eng. Starting Air Receivers, No. *1* Total cubic capacity *275 cu* 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/cm<sup>2</sup>* Working pressure *55 kg/cm<sup>2</sup>*

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*  
(If not, state date of approval)  
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 & 1 connecting rod, 1 upper & 1 lower cylinder cover, 4 telescoping cooling pipes, 1 upper & 1 lower cylinder liner, 1 upper & 1 lower fuel pump & cam, 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*  
*Manufaktur.*  
*Act. Ges. "Weser"*

Dates of Survey while building  
During progress of work in shops: 1938 Apr. 25, June 14, 17, July 14, Aug. 2, 11, 17, Sept. 2, 10, 17, Oct. 15, 22, Nov. 4, 5, 7, 15, 23, Dec. 1, 3, 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 *27.2.39* Connecting rods *28.3.39*  
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*  
2 MAIN WHEEL SHAFT Identification Mark *14178 M.B. 20.10.38*  
Thrust shaft, Material *S.M. Steel* Identification Mark *H.K. 1200 26.2.38* Intermediate shafts, Material *S.M. Steel* Identification Mark *14154/5 22.11.38*  
Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *P.M. Steel* Identification Mark *M.B. 3542 29.1.38*  
Identification Mark *M.B. 14076 8.8.38*

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 Port 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* 3338.- : 17.6.1939.  
Donkey Boiler Fee 114.- : When received,  
Travelling Expenses (if any) £ 95.- : 20/7 1939

Committee's Minute

Assigned

*+ LMC 6.39 Oil Eng*  
*DB 7/11 200 (WT) 85 lb*  
*CL*

*A. Cantun*  
Engineer Surveyor to Lloyd's Register of Shipping.



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