

REPORT ON OIL ENGINE MACHINERY.

No. 1925.

JUN 26 1937

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Port of BREMEN

No. in Survey held at BREMEN & WESERMÜNDE
Reg. Book.Date, First Survey 11th Aug. 1936 Last Survey 8th June 1937

Number of Visits 79

38442 on the ~~Triple~~ ^{Single} Screw vesselGAMBIANTons { Gross 5452
Net 3106

Built at WESERMÜNDE

By whom built DEUTSCHE SCHIFF UND MASCHINENBAU A.G.
WERK: SEEBECK

Yard No. 571 When built 1937

Engines made at BREMEN

By whom made DEUTSCHE SCHIFF UND MASCHINENBAU A.G.
WERK: A.G. WESER

Engine No. 138/39 When made 1937

Donkey Boilers made at HAMBURG

By whom made DEUTSCHE WERFT

Boiler No. 695 When made 1937

Brake Horse Power 2 x 1200, 2300

Owners LEVER BROS. TORONTO

Port belonging to FREETOWN

Nom. Horse Power as per Rule 577 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 OIL ENGINES SINGLE REDUCTION GEARED TO ONE PROP. SHAFT
WESER-MAN. G.6.2.U. 42/58 2 or 4 stroke cycle 2 Single or double acting SINGLEMaximum pressure in cylinders 45 kg/cm² Diameter of cylinders 420 Z Length of stroke 580 Z No. of cylinders 2 x 6 No. of cranks 2 x 6Mean Indicated Pressure 5.3 kg/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 510 Z Is there a bearing between each crank yes

Revolutions per minute 275 Flywheel dia. 90 Weight Means of ignition Diesel principle Kind of fuel used Diesel oil

Crank Shaft, { Solid forged dia. of journals as per Rule 270 Z Crank pin dia. 270 Z Crank Webs Mid. length breadth 330 Z Thickness parallel to axis shrunk Thickness around eyehole

Flywheel Shaft, diameter as per Rule 300 Z Intermediate Shafts, diameter as per Rule 300 Z Thrust Shaft, diameter at collars as per Rule 330 Z

Tube Shaft, diameter as per Rule 336 Z Is the { tube screw } shaft fitted with a continuous liner { yes

Bronze Liners, thickness in way of bushes as per Rule 18 Z Thickness between bushes as fitted 17.5 Z 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

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 no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1640 Z

Propeller, dia. 4980 Pitch 4690 No. of blades 4 Material bronze whether Moveable no Total Developed Surface 88 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 27 Z 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 4 funnel

Cooling Water Pumps, No. 3 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 1 rotary self-priming 200 m³/h, 2 piston pumps, 200 dia 203 Z stroke

How driven electrically

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 1 rotary 200 m³/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3 cog wheel 45 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 5 of 90 Z dia. in Tunnel 2 of 90 Z In Pump Room

In Holds, &c. I. 2 of 90 Z, II. 2 of 90 Z, III. (Deep tank) 2 of 90 Z, IV. 4 of 90 Z V. 1 of 75 Z 2 of 65 Z

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 125 Z dia, 1 of 180 Z dia

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, these direct 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 upper Eng. Room

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. 2 No. of stages 2 Diameters 200/75 Z Stroke 188 Z Driven by Aux. Diesel Eng.

Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 98/38 Z Stroke 75 Z Driven by

What provision is made for first Charging the Air Receivers 1 hand compressor, 2 reg. 120/40 Z dia by 75 Z stroke

Scavenging Air Pumps, No. 2 Diameter 11200 m³/h Driven by Main Engines

Auxiliary Engines crank shafts, diameter as per Rule 130 Z No. 3 of 165 BHP, 1 of 85 kW

Have the Auxiliary Engines been constructed under special survey yes 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*

STARTING INJECTION Air Receivers, No. *1*

Cubic capacity of each *275 cu.*

Is a drain fitted at the lowest part of each receiver *yes*

Seamless, lap welded or riveted longitudinal joint *Seamless*

Material *P.M. Steel*

Internal diameter *416 2*

thickness *14 2*

Range of tensile strength *50.6 kg/cm²*

Working pressure by Rules *60 kg/cm²*

Actual *30*

Starting Air Receivers, No. *2*

Total cubic capacity *2 x 3800 lbs.*

Internal diameter *1195 2*

thickness *27.5 2*

Range of tensile strength *38-44 kg/cm²*

Working pressure by Rules *30 kg/cm²*

Actual *30*

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only *yes*

If so, is a report now forwarded? *yes*

PLANS. Are approved plans forwarded herewith for Shafting *3.6.36, 24.6.36*

(If not, state date of approval)

Receivers *3.9.36*

Separate Fuel Tanks *-*

Donkey Boilers *from Hamburg*

General Pumping Arrangements *18.12.36*

Pumping Arrangements in Machinery Space *18.12.36*

Oil Fuel Burning Arrangements *-*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*

State the principal additional spare gear supplied *For Main Engines*

1 piston each. 2 1/2 main bearing frames; 2 sets of linked pipes for piston cooling; 1 cylinder liner, 1 cylinder cover 2 wings for reversing Hovers and 3 driving chains; 1 driving chain for fuel pumps

The foregoing is a correct description,

Deutsche Schiff- und Maschinenbau Aktiengesellschaft

Manufacturer.

Dates of Survey while building
During progress of work in shops - *Aug. 11, 12, 20, 22, Sept. 5, 11, 17, 19, 21, 23, 24, 30, Oct. 1, 9, 13, 14, 20, 31, 22, 26, Nov. 2, 5, 6, 7, 10, 14, 19, 23, 28, Dec. 2, 8, 10, 15, 16, 18, 23, 29, 30, 1937 Jan. 6, 13, 15, 20, 22, 27, Feb. 8, 9, 10, 15, 17, 18, 19, 25, March 3, 5, 8, 9, 11, 16, 16, 19, 1937 April 1, 2, 7, 10, 15, 20, 27, May 3, 7, 12, 18, 21, 25, 28, June 1, 4, 5, 7, 8*
Total No. of visits *79*

Dates of Examination of principal parts—Cylinders *19/9.36-6.12.36* Covers *26/10.36-27.12.37* Pistons *26/10.36-15.2.36* Rods *26/10.36-19.3.37* Connecting rods *26/10.36-19.3.37*
Crank shaft *26/10.36-25.2.37* Flywheel shaft *-* Thrust shaft *27.1.37* Intermediate shafts *16.3.37* Tube shaft *-*
Screw shaft *16.3.37* Propeller *16.3.37* Stern tube *23.11.36* Engine seatings *9.4.37* Engines holding down bolts *27.4.37*

Completion of fitting sea connections *16.3.37* Completion of pumping arrangements *8.6.37* Engines tried under working conditions *8.6.37*
Crank shaft, Material *P.M. Steel* Identification Mark *LLOYD'S K.H. 16461 & K.H. 16470* Flywheel shaft, Material *-* Identification Mark *J.L. 11656*
Thrust shaft, Material *P.M. Steel* Identification Mark *LLOYD'S M.B. 12382, 27.7.36* Intermediate shafts, Material *P.M. Steel* Identification Mark *J.L. 11656*
Tube shaft, Material *-* Identification Mark *LLOYD'S M.B. 12382, 27.7.36* Screw shaft, Material *P.M. Steel* Identification Mark *J.L. 11656*

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 *in 2 deep tanks* 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 *no*

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 Plans are correct, and in conformity with the requirements of the Rules. The materials used in the construction are made at works recognised by the Committee and tested as per Rule. The workmanship is of good quality. During two trial trips all the machinery has been tested under full working and manoeuvring condition and found satisfactory in all respects. This machinery is eligible in our opinion to be classed in the Port. Reg. Book with records of: * LMC. 6.37. OIL ENGINES. TRAIL SHAFT CL.*

The amount of Entry Fee .. RM *120.-* When applied for, *2.2.36 1937*
Special ... *2222.-*
Donkey Boiler Fee ... *1*
Travelling Expenses (if any) *200.-* When received, *14.8.1937*

Committee's Minute

Assigned + Lmc 6.37 should be 2062.
are bug CL 2 AB (WTB) 100lb

S. Rantmann G. H. C. Kahr
Engineer Surveyor to Lloyd's Register of Shipping.



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