

REPORT ON OIL ENGINE MACHINERY.

No. 1240.  
13 MAR 1930

Received at London Office

Writing Report 2<sup>nd</sup> March 1930 When handed in at Local Office 10<sup>th</sup> March 1930 Port of Bremen  
Survey held at Ludwigshafen a/Rh. Date, First Survey 18<sup>th</sup> September 1929 Last Survey 1<sup>st</sup> March 1930  
Book. Number of Visits 16  
Single on the Twin Triple Quadruple Screw vessel Tons Gross 4000 Net  
at Sairon Nagasaki By whom built Maushu Dockyard Yard No. 490 When built 1929/30  
Lines made at Ludwigshafen a/Rh By whom made Schneider Suhlzer A. G. Cylinder 6125 Engine No. 6128 When made 1929/30  
Boilers made at By whom made Boiler No. When made  
Horse Power 1500HP Owners Port belonging to  
Horse Power as per Rule 389 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
e for which vessel is intended

ENGINES, &c.—Type of Engines 4560 331 PWD - 331 STD 2 or 4 stroke cycle 2 Single or double acting single  
um pressure in cylinders 38.5 kg/cm<sup>2</sup> Diameter of cylinders 600 mm Length of stroke 1060 mm No. of cylinders 4 No. of cranks 4 for work. cyl.  
of bearings, adjacent to the Crank, measured from inner edge to inner edge 870 mm Is there a bearing between each crank yes  
tions per minute 125 Flywheel dia. 2100 mm Weight 7955 mm Means of ignition air injection Kind of fuel used gas oil  
Shaft, dia. of journals as per Rule 405 mm Crank pin dia. 405 mm Crank Webs Mid. length breadth 550 mm shrunk Thickness parallel to axis  
Thrust Shaft, diameter as per Rule 405 mm Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule  
as fitted 405 mm as fitted as fitted as fitted  
Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner  
as fitted as fitted as fitted

te Liners, thickness in way of bushes as per Rule Thickness between bushes as per rule Is the after end of the liner made watertight in the  
er 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 end of the tube  
If so, state type Length of Bearing in Stern Bush next to and supporting propeller

ller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet  
d of reversing Engines directly by crank. Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes, governor Means of lubrication  
Thickness of cylinder liners 38 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with  
ducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

ing Water Pumps, No. 2 piston cooling pumps fitted to the engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
Pumps worked from the Main Engines, No. one Diameter 130 mm Stroke 330 mm Can one be overhauled while the other is at work yes

s connected to the Main Bilge Line No. and Size How driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 pump for bearing lubrication 17.5 m<sup>3</sup>  
t Pumps, No. and size 1 pump for crosshead lubrication 4.75 m<sup>3</sup>  
independent means arranged for circulating water through the Oil Cooler 1 independent oil pump 12.6 m<sup>3</sup>  
No. and size:—In Machinery Spaces Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

ds, &c.

endent 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 Are the Bilge Suctions in the Machinery Spaces  
n easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks  
y 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  
y 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  
ipes pass through the bunkers How are they protected  
ipes 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  
rrangement 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  
ment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

ad vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork  
Air Compressors, No. one, fitted No. of stages 3 Diameters 370-480-150 mm Stroke 400 mm Driven by main crank shaft  
ary Air Compressors, No. No. of stages Diameters Stroke Driven by  
Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by  
aging Air Pumps, No. one, fitted Diameter 1270 mm Stroke 700 mm Driven by main crank shaft  
ary Engines crank shafts, diameter as per Rule  
as fitted

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes  
internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces covers and openings on bottom  
a drain arrangement fitted at the lowest part of each receiver yes

Pressure Air Receivers, No. 6 Cubic capacity of each 150.14 Internal diameter 540 mm thickness 16 mm  
ss, lap welded or riveted longitudinal joint seamless Material S. M. Steel Range of tensile strength 44-50 kg/cm<sup>2</sup> Working pressure by Rules 7.5 atm  
ng Air Receivers, No. Total cubic capacity Internal diameter thickness  
ss, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *yes*  
(If not, state date of approval)

Receivers *yes*

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR *as per Rules*

The foregoing is a correct description,

**Gebrüder Sulzer**

**Aktiengesellschaft**

Manufacturer.

Dates of Survey while building  
During progress of work in shops - -  
During erection on board vessel - -  
Total No. of visits

Dates of Examination of principal parts—Cylinders *18/9.29; 24.9.29; 30.9.29; 14/12.10.29; 28.10.29; 12.11.29; 22.11.29; 9.12.29; 28.12.29; 15.1.30; 28.1.30; 26.2.30; 1.3.30*  
Covers *18/9.29* Pistons *28.10.29; 27.1.30* Rods *28.12.29* Connecting rods *28.12.29*  
Crank shaft *28.12.29* Thrust and Flywheel shaft *28.12.29* 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 shaft, Material *S.M. Steel* Identification Mark *LLOYD'S V.S. 832* Thrust and Flywheel shaft, Material *S.M. Steel* Identification Mark *LLOYD'S V.S. 832*  
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. *yes*

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

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. *above Diesel engine and its accessories have been constructed*

*under Special Survey in accordance with the approved plans and instructions thereto, as well as with the Rules and Regulations. The materials used in the construction are good and the workmanship is satisfactory. The engine has been tested on the makers test bed and was working satisfactorily.*

*In my opinion the vessel for which the engine is intended will be eligible for the notation of LMC (with date), provided it will be satisfactory fitted on board the vessel and tested under full working conditions. Max. working pressure in the cylinders not to exceed 38 kg/cm<sup>2</sup>*

*For identification the cylinder jackets have been stamped:*

*LLOYD'S TEST No 832 Gatin P.K. 30.9.29/11.10.29*

*R.S. 28.10.29*

*The forgings viz:- crankshaft, flywheel and thrustshaft, compressor and scav. pump throw, connecting rods, piston rods, compressor and scav. pumps piston and connecting rods, which were tested by the Surveyors to the Germanischer Lloyd (please see the Secretary's letter E dated 21.6.29) have been inspected by me and were found free from defects.*

*A copy of this report has been sent to the District Surveyor.*

*7 air receivers £ 3 : 13 : 0*

The amount of Entry Fee ... £ 4 : 0 : 0 When applied for, *10.3.1930*

*4/5 Special* ... £ 67 : 0 : 0

Donkey Boiler Fee ... £ : : When received, *11/4/30*

Travelling Expenses (if any) £ 19 : 12 : 0

Committee's Minute *FRI. 17 JUL 1930*

Assigned *Sec. F.C. Rpt.*

Engineer Surveyor to Lloyd's Register of Shipping.



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