

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 1774.

12 MAR 1936

Received at London Office

Date of writing Report 2nd March 1936 When handed in at Local Office 2nd March 1936 Port of BremerNo. in Survey held at Lübeck Date, First Survey 15th July 1935 Last Survey 2nd March 1936  
Reg. Book. Number of Visits 119on the Single Twin Triple Quadruple Screw vessel  
Tons Gross  
NetBuilt at Hamburg By whom built Deutsche Werft A.G. Yard No. 169 When built 1935/36Engines made at Lübeck By whom made Maschinenfabrik Augsburg-Nürnberg Engine No. 671000 When made 1935/36

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 2700/3500 Owners Port belonging toNom. Horse Power as per Rule 500 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines K8V65/140 25 1/2 55 1/8 2 or 4 stroke cycle 4 Single or double acting singleMaximum pressure in cylinders 45 atm ✓ Diameter of cylinders 650 mm ✓ Length of stroke 1400 mm ✓ No. of cylinders 8 ✓ No. of cranks 8 ✓Mean Indicated Pressure 8.5 atm Is there a bearing between each crank yesSpan of bearings, adjacent to the Crank, measured from inner edge to inner edge 844 mm Kind of fuel usedRevolutions per minute 120 Flywheel dia. 2100 mm Weight 5500 kg Means of ignition direct, ign.Crank Shaft, dia. of journals 460 mm ✓ Crank pin dia. 480 mm ✓ Crank Webs Mid. length breadth 870 mm Mid. length thickness 267/290 mm shrunk Thickness parallel to axis 290/267 mm Thickness around eyehole 204 mmFlywheel Shaft, diameter 460 mm ✓ 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 {

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 direct, by means of compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes ✓ Means of lubricationThickness of cylinder liners 45 mm Are the cylinders fitted with safety valves yes ✓ Are the exhaust pipes and silencers water cooled or lagged withCooling Water Pumps, No. 1 If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engineBilge Pumps worked from the Main Engines, No. 1 Diameter 35 1/4 at 825 rpm Is the sea suction provided with an efficient strainer which can be cleared within the vesselPumps connected to the Main Bilge Line No. and Size How driven Can one be overhauled while the other is at work yes ✓

Is the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements main engine Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1, 40 1/2 at 275 rpm

Ballast Pumps, No. and size 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, &amp;c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Are the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are they fitted with Valves or Cocks

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 the Overboard Discharges above or below the deep water line

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Blow Off Cocks fitted with a spigot and brass covering plate

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel How are they protected

What pipes pass through the bunkers Have they been tested as per Rule

What pipes pass through the deep tanks 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. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position

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**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

**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, D 105603 23.5.35* Receivers Separate Fuel Tanks  
(If not, state date of approval) *20/9/35 28.6.35*

Donkey Boilers General Pumping Arrangements Pumping Arrangements in Machinery Space

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.*

Manufacturer.

Dates of Survey while building  
During progress of work in shops--  
During erection on board vessel--  
Total No. of visits  
*July 1935: 15, 16, 19, 20, 23, 24, 25, 26, 27. August: 1, 2, 3, 9, 12, 13, 14, 16, 17, 20, 21, 22, 23, 24, 26, 28. September: 3, 4, 5, 6, 7, 9, 10, 11, 12. Area 14.25. October: 9, 10, 11, 12, 16, 17, 18, 19, 21, 22, 23, 25, 26, 28. November: 4, 6, 11, 12, 13, 14, 15, 16, 22, 23, 26, 27, 28, 29. December: 2, 4, 5, 7, 9, 10, 12, 14, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 28, 29. January 1936: 2, 3, 4, 6, 13, 14, 15, 16, 17, 18, 22, 23, 29, 30, 31. February: 1, 3, 4, 7, 8, 10, 11, 12, 13, 15, 16, 17, 18, 19, 21, 22, 23, 25, 26, 27, 28, 29. March: 2.*  
*liners 5, 6, 10, 31, 32, 35 6, 12, 14, 15, 17, 36*

Dates of Examination of principal parts—Cylinders *29.1.36* Covers *do* Pistons *5, 29, 31, 36* Rods *5, 11, 36* Connecting rods *3, 4, 11, 36*

Crank shaft *14.12.36* Flywheel shaft *10.2.36* 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 *3L 10/26/27 18.11.35* Flywheel shaft, Material *S.M. steel* Identification Mark *3L 100 64 1.10.35*

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 *m.v. Genata*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *This heavy oil engine has been constructed under special survey in accordance with the Society's Rules and Regulations as well as with the approved plans and instructions thereto.*

*The material used in the construction is good and the workmanship is satisfactory.*

*The engine has not been tested on the test bed of the makers.*

*In our opinion the vessel for which this engine is intended will be eligible for the notation of  $\star$  LMC [with date] when the whole machinery has been fitted satisfactorily on board and tried under full working conditions.*

*A copy of this report has been sent to the Hamburg Surveyors.*

The amount of  $\frac{1}{2}$  Entry Fee .. £ *7 : 17 :* When applied for,  
 $\frac{1}{2}$  Special ... .. £ *130 : 13 :* *9.3.1936*  
Donkey Boiler Fee ... .. £ : : When received,  
Travelling Expenses (if any) £ *19 : 8 :* *30.3.1936* *2/4*

Committee's Minute

*FRI. 19 JUN 1936*

Assigned

*See Ham. J.E. 21939*

*K. Thronok 1. Petersen.*

Engineer Surveyor to Lloyd's Register of Shipping.



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