

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 1799

15 JUN 1936

Received at London Office

Date of writing Report 7th June 1936 When handed in at Local Office 7th June 1936 Port of Bremen

No. in Survey held at Lugzburg Date, First Survey 28th March 1936 Last Survey 6th June 1936  
Reg. Book. Number of Visits 41

Single  
Twin  
Triple  
Quadruple  
Screw vessel

*Novelys*

Tons }  
Gross  
Net

Built at Hamburg By whom built Meiss. Deutsche Werft A.G. Yard No. 187 When built 1936

Engines made at Lugzburg By whom made Meiss. Masch. Fabrik Lugzburg Nürnberg Engine No. 691110 When made 1936

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

Brake Horse Power 4100 Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

Nom. Horse Power as per Rule 1167 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

Trade for which vessel is intended \_\_\_\_\_

IL ENGINES, &c.—Type of Engines 06260/110 2 or 4 stroke cycle 2 Single or double acting double

Maximum pressure in cylinders 4.5 atm Diameter of cylinders 600 mm Length of stroke 1100 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 5.3 atm Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 895 mm Is there a bearing between each crank yes

Revolutions per minute 116 Flywheel dia. 2100 mm Weight 3400 kg Means of ignition dir. inj. Kind of fuel used \_\_\_\_\_

Crank Shaft, dia. of journals as per Rule \_\_\_\_\_ as fitted 420 mm Crank pin dia. 420 mm Crank Webs Mid. length breadth 710 mm Thickness parallel to axis 265 mm  
Mid. length thickness 250 mm shrunk Thickness around eyehole 185 mm

Flywheel Shaft, diameter as per Rule \_\_\_\_\_ as fitted 440 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 / screw } 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 \_\_\_\_\_

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 comp. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced

Thickness of cylinder liners 40 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with \_\_\_\_\_

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 \_\_\_\_\_

Boiling Water Pumps, No. \_\_\_\_\_ Is the sea suction provided with an efficient strainer which can be cleared within the vessel \_\_\_\_\_

Ge 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 \_\_\_\_\_ How driven \_\_\_\_\_

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 \_\_\_\_\_

Fast Pumps, No. and size \_\_\_\_\_ main engine Power Driven Lubricating Oil Pumps, (cog wheel type) including Spare Pump, No. and size 1, 40 cm<sup>3</sup>/h at 400 rpm

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 \_\_\_\_\_

Holds, &c. \_\_\_\_\_

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size \_\_\_\_\_

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes \_\_\_\_\_ Are the Bilge Suctions in the Machinery Spaces \_\_\_\_\_

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 they fitted with Valves or Cocks \_\_\_\_\_

Are they 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 \_\_\_\_\_

Are they 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 \_\_\_\_\_

How are they protected \_\_\_\_\_

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 \_\_\_\_\_

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 \_\_\_\_\_

apartment to another \_\_\_\_\_ Is the Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork \_\_\_\_\_

Auxiliary Air Compressors, No. \_\_\_\_\_ No. of stages \_\_\_\_\_ Diameters \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

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Revolving Air Pumps, No. \_\_\_\_\_ Diameter \_\_\_\_\_ Stroke \_\_\_\_\_ Driven by \_\_\_\_\_

Auxiliary Engines crank shafts, diameter as per Rule \_\_\_\_\_ as fitted \_\_\_\_\_ No. \_\_\_\_\_ 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 <sup>by Rules</sup> 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 <sup>by Rules</sup> 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 <sup>460, 2109232, 2109317, 2204042</sup> Receivers <sup>Letter E 16.12.35</sup> Separate Fuel Tanks

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.*  
*175 Thurnstrasse, Nürnberg* Manufacturer.

1936 March: 28. April: 7. 16. 18. 20. 21. 22. 23. 24. 27. 28. 29. 30. May: 2. 4. 5. 6. 7. 8. 9. 11. 12. 13. 14. 15. 18. 19. 20. 22. 23. 26. 27. 28. 29. 30. June: 2. 3. 4. 5. 6.  
Dates of Survey while building { During progress of work in shops - - }  
{ During erection on board vessel - - - }  
Total No. of visits *Seven: 7. 4. 5. 36*

Dates of Examination of principal parts—Cylinders *11/12. 5. 36* Covers *4/12. 5. 36* Pistons *29/30. 4. 36* Rods *12/13. 5. 36* Connecting rods *15/20/24. 5. 36*  
Crank shaft *8. 5. 36* Flywheel shaft *19. 5. 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 *LB 445/446/447* Flywheel shaft, Material *S. M. Steel* Identification Mark *7. 27. 2. 36*  
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  If so, state name of vessel *Deutsche Werft 163*

**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 hereto.*  
*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 S.L.M.C. 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 Entry Fee .. *£11. 96. 00* : When applied for, .....  
*1/5 Special* ... .. *22067. 00* : ..... 10. 6. 1936.  
Donkey Boiler Fee ... £ : : When received, .....  
Travelling Expenses (if any) *£11. 82. 00* : *9. 7. 1936*

Committee's Minute **FRI. 16 OCT 1936**  
Assigned *See F.E. mchry report*

*L. J. Strawick* *P. Jensen*  
Engineer Surveyors to Lloyd's Register of Shipping.  
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Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)