

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 126 Reg. Book.

Date, First Survey 28th March 1936 Last Survey 6th June 1936

Number of Visits 41

on the Single
Twin
Triple
Quadruple
Screw vessel

Novelys

Tons
Gross
Net

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

Engines made at Augsburg By whom made Harms Maschinenfabrik Augsburg-Munich 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

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

Maximum pressure in cylinders 45 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 420 mm Crank pin dia. 420 mm Crank Webs Mid. length breadth 710 mm Thickness parallel to axis 265 mm
as fitted 420 mm Mid. length thickness 250 mm Thickness around eye-hole 185 mmFlywheel Shaft, diameter as per Rule 440 mm Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted 440 mm as fitted as fittedTube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner
as fitted as fittedBronze 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
as fitted as fitted

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 cam 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

Cooling 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

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, including Spare Pump, No. and size 1, 40 cm/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

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

All Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks 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

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

Main Air Compressors, No. No. of stages Diameters Stroke Driven by

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

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

Sucking Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule No.
as fitted Position

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 ^{D109232}
(If not, state date of approval) ^{D109317} Receivers ^{Letter E 16.12.35}
^{D204042}

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.

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: 7.4.5.26*

Dates of Examination of principal parts—Cylinders *14/12.5.26* Covers *4/12.5.26* Pistons *29/30.4.26* Rods *12/13.5.26* Connecting rods *15/20/24.5.26*
Crank shaft *8.5.26* Flywheel shaft *19.5.26* 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 *LB 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 *yes*

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 *£2067.00* : *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. mch report

L. J. Strawick *P. Jensen*
Engineer Surveyors to Lloyd's Register of Shipping.



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Foundation