

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 1809.

Received at London Office

4 AUG 1936

Date of writing Report 26th July 1936 When handed in at Local Office 26th July 1936 Port of Bremen
No. in Survey held at Augsburg Date, First Survey 29th May 1936 Last Survey 25th July 1936
Reg. Book. Single on the Twin Screw vessel Triple Quadruple
Built at Hamburg By whom built Thorn. Deutsche Hufl & G. Yard No. 182 When built 1936
Engines made at Augsburg By whom made Thorn. Masch. fabrik Augsburg-Munich Engine No. 691120 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 D62m 60/110 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 Is there a bearing between each crank yes
Revolutions per minute 116 Flywheel dia. 2100 mm Weight 3400 kg Means of ignition dir. ign. Kind of fuel used

Crank Shaft, dia. of journals 420 mm as per Rule 420 mm as fitted Crank pin dia. 420 mm Crank Webs 710 mm Mid. length breadth 265 mm Thickness parallel to axis 265 mm
Flywheel Shaft, diameter 420 mm as per Rule 420 mm as fitted Intermediate Shafts, diameter 420 mm as per Rule 420 mm as fitted Thrust Shaft, diameter at collars 420 mm as per Rule 420 mm as fitted

Tube Shaft, diameter 420 mm as per Rule 420 mm as fitted Screw Shaft, diameter 420 mm as per Rule 420 mm as fitted Is the { tube screw } shaft fitted with a continuous liner { }

Bronze Liners, thickness in way of bushes 40 mm as per Rule 40 mm as fitted Thickness between bushes 40 mm as per Rule 40 mm 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 cam Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

Are the cylinders fitted with safety valves yes Are the exhaust pipes and oil 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

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

Ballast Pumps, No. and size main engine (cog wheel type) Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1, 40 cm/h at 400 rpm
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, &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

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 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

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
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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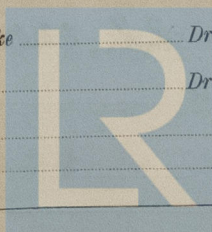
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AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

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 Shafing ^{D 109232} ^{D 109217} ^{Letter E} Receivers
(If not, state date of approval ^{D 204042} ^{16.12.3})

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.

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

May 1936: 28.29.30 June: 2.3.4.5.6.8.9.10.12.13.15.16.17.18.19.20.22.23.24.25.26.27.30. July: 1.2.3.4.6.7.8.9.10.11.13.14.15.16.17.

Lines 1/2/3/4/7.7.36

Dates of Examination of principal parts—Cylinders 6/7.7.36

Covers 7/12.7.36

Pistons 8.6.36

Rods 7/8/9.7.36 Connecting rods 13.7.36

Crank shaft 14.7.36

Flywheel shaft 21.7.36

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

KH 16329 28.5.36

Flywheel shaft, Material S.M. Steel

Identification Mark

7.8.5779.27.3.36

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 Neufahrt No 187, engine No 621410*

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 Soc. Rules and Regulations as well as with the approved plans and instructions

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

The engine has not been tested in the test bed of the makers

In our opinion the vessel for which this engine is intended will be eligible for the notation of +LMC [with date] when the whole machinery has been satisfactorily fitted 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

£ 96.00

When applied for,

Special

£ 2067.00

1.8.1936

Donkey Boiler Fee

£ :

When received,

Travelling Expenses (if any)

£ 82.00

27.8.1936

Committee's Minute

FRI. 20 NOV 1936

Assigned

see Ham 22091

L. J. Drew

H. Petersen

Engineer Surveyor to Lloyd's Register of Shipping.



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