

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

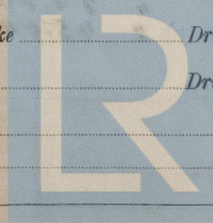
No. 1806.

Received at London Office

22 JUL '36

Date of writing Report 15th July 1936 When handed in at Local Office 15th July 1936 Port of Bremen
No. in Survey held at Augsburg Date, First Survey 2nd April 1936 Last Survey 14th July 1936
Reg. Book. Single on the Twin Screw vessel Motor tanker "Rigel" Number of Visits 72
Triple
Quadruple
Built at Hamburg By whom built Deutsche Werft A. G. Yard No. 176 When built 1936
Engines made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg Engine No. 580140 When made 1936
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 500/560 Owners Port belonging to
Nom. Horse Power as per Rule 161 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended

IL ENGINES, &c. Type of Engines 98 1/2 50 14 3/8" 19 1/16" 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 49 atm Diameter of cylinders 365 mm Length of stroke 500 mm No. of cylinders 8 No. of cranks 8
Mean Indicated Pressure 7.1 atm
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 452 mm Is there a bearing between each crank yes
Revolutions per minute 190/215 Flywheel dia. 1500 mm Weight 2350 kg Means of ignition dir. ign. Kind of fuel used Diesel oil on test bed
Crank Shaft, dia. of journals as per Rule 220 mm Crank pin dia. 220 mm Crank Webs Mid. length breadth 360 mm Thickness parallel to axis shrunk
as fitted 220 mm Mid. length thickness 115 mm Thickness around eyehole
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule
as fitted Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the { tube { shaft fitted with a continuous liner {
as fitted { screw {
Bronze 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 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 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 27 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material cooled 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. 1, 23.4 m³/h at 215 r.p.m. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Bilge Pumps worked from the Main Engines, No. 1 Diameter 95 mm Stroke 160 mm Can one be overhauled while the other is at work yes
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 (cap wheel)
Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1, 3.9 m³/h at 430 r.p.m.
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 No. Position
as fitted



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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. 2

Total cubic capacity 2 x 800 lbs

Internal diameter 57 1/2 in

thickness 1 1/4 in

Seamless, lap welded or riveted longitudinal joint

Material S.M. Steel

Range of tensile strength 44-47 kg/cm²

Working pressure

by Rules
Actual 30 atm

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, plan D 67737*
(If not, state date of approval) *Letter E 7.12.35*

Receivers *yes, plan H 20072*
Letter E 7.4.36

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.

fr. K. Schumann

fr. J. Rander

Manufacturer.

Dates
of Survey
while
building

During progress of
work in shops--
During erection on
board vessel--
Total No. of visits

April 1936: 2, 3, 6, 7, 8, 9, 11, 16, 17, 18, 20, 21, 27, 28, 29, 30 May: 1, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 18, 19, 20, 22, 23, 25, 26, 27, 28, 29, 30 June: 1, 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, 7, 8, 9, 10, 11, 12

Dates of Examination of principal parts—Cylinders

28.5.36

Covers *15.6.36*

Pistons *16.6.36*

Rods

Connecting rods *3.6.36*

Crank shaft

13.7.36

Flywheel shaft

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 *LLLOYD'S*

MB 12103

Flywheel shaft, Material

Identification Mark

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 *Campbell & Nicholson yard No. 397*

General Remarks

(State quality of workmanship, opinions as to class, &c. *This heavy oil engine and its accessories have been constructed under special survey in accordance with the Soc. Rules and Regulations as well as with the approved plans & instructions thereto.*

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

The engine has been tested on the makers test bed during 15 hours consecutively running under full load, 10% overload and partial loads in the presence of the undersigned and was found to be in safe working condition during these trials. After the trials the engine has been opened out for inspection and was found in order.

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 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

£ 48.00

When applied for,

45 Special

£ 644.00

20.7.1936

4 air receivers

£ 84.00

Donkey Boiler Fee

£ 84.00

When received,

Test bed trials

£ 84.00

14.8.1936

Travelling Expenses (if any)

£ 45.00

19/8

Peterson & J. J. J. J.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Ham. J. 6. 22126



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