

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 86^B

DEC -4 1939

Received at London Office

Date of writing Report 17th NOV. 1939 When handed in at Local Office

Port of GRONINGEN

No. in Survey held at MARTENSHOEK
Reg. Book.Date, First Survey 19th AUGUST Last Survey 14th NOV. 1939

Number of Visits 13

on the ^{Single}
~~Twin~~
^{Triple}
~~Quadruple~~ Screw vessel"E MINENT"Tons { Gross 499.73
Net 328.95

Built at MARTENSHOEK

By whom built BODEWES SCHEEPSWERVEN Yard No. 302 When built 1939

Engines made at AUGSBURG

By whom made MEIJRS M.A.N.

Engine No. 511630 When made 1939

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 400

Owners W. WERKMAN

Port belonging to GRONINGEN

Nom. Horse Power as per Rule 97.8 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES

Trade for which vessel is intended SEA GOING

L ENGINES, &c.—Type of Engines 68 VU 42 HEAVY OIL ENGINE 2 or 4 stroke cycle 4 Single or double acting SINGLE

SEE BREMEN REPORT NO 2158

Maximum pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders 8

No. of cranks 8

Mean Indicated Pressure

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

Is there a bearing between each crank YES

Revolutions per minute 300

Flywheel dia.

Weight

Means of ignition SOLID INJ.

Kind of fuel used DIESEL OIL

Crank Shaft, { Solid forged
Semi built dia. of journals as per Rule
All built as fitted

Crank pin dia.

Crank Webs

Mid. length breadth

shrunk

Thickness parallel to axis

Thickness around eyehole

Flywheel Shaft, diameter as per Rule
as fittedIntermediate Shafts, diameter as per Rule
as fittedThrust Shaft, diameter at collars as per Rule
as fitted 160¹/₄Stern Tube Shaft, diameter as per Rule
as fittedScrew Shaft, diameter as per Rule
as fitted 165¹/₁₆₀¹/₁₆Is the { tube
screw } shaft fitted with a continuous liner { YES } NoBronze Liners, thickness in way of bushes as per Rule
as fittedThickness 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 560¹/₄Propeller, dia. 1800¹/₄ Pitch 1200¹/₄ No. of blades 4

Material BRONZE whether Moveable NO

Total Developed Surface 50% ~~100%~~

Method of reversing Engines BY HAND

Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES

Means of lubrication

FORCED Thickness of cylinder liners

Are the cylinders fitted with safety valves YES

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material YES If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine TO FUNNEL

Cooling Water Pumps, No. TWO

Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Bilge Pumps worked from the Main Engines, No. 1

Diameter 105¹/₄ Stroke 120¹/₄ Can one be overhauled while the other is at work

Bilge Pumps connected to the Main Bilge Line

No. and Size

1 BILGE PUMP, CAPACITY 30 T/H ; 1 BALLAST BILGE PUMP, CAP. 60 T/H

How driven

ELECTR. MOTOR

ELECTR. MOTOR

AND MAIN ENGINE BILGE PUMP

If the cooling water led to the bilges

NO

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 ONE, CAP 60 T/H

MAIN ENGINE

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 x 5.24 M³/H

Are two independent means arranged for circulating water through the Oil Cooler YES

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces 3 x 2¹/₂"

1 BILGE SUCTION 2" FROM MANUAL PUMP In Pump Room

Holds, &c. 2 x 2¹/₂" & 2 x 2"Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 x 2¹/₂"

one included above

Are all the Bilge Suction pipes in Holds and Tunnels fitted with strum-boxes YES

Are the Bilge Suctions in the Machinery Spaces

fitted from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

Are all Sea Connections fitted direct on the skin of the ship YES

Are they fitted with Valves or Cocks VALVES

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates YES

Are the Overboard Discharges above or below the deep water line ABOVE

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel YES

Are the Blow Off Cocks fitted with a spigot and brass covering plate YES

Do the pipes pass through the bunkers

How are they protected

Do the 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 YES

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 YES Is the Shaft Tunnel watertight NO YES 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. 1

No. of stages 2

Diameters 80¹/₄₀¹/₄Stroke 80¹/₄

Driven by MAIN ENGINE

Auxiliary Air Compressors, No. 1

No. of stages 2

Diameters 40¹/₂₅¹/₄Stroke 100¹/₄

Driven by AUX. ENGINE

Small Auxiliary Air Compressors, No. 1

No. of stages 2

Diameters 45¹/₁₈¹/₄Stroke 42¹/₄

Driven by HAND

What provision is made for first Charging the Air Receivers HAND AIR COMPRESSOR CHARGING SMALL AIR VESSEL FOR AUX. ENGINE

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter as per Rule
as fitted 90¹/₄

No. 1

Position IN E.T. ON STARBOARD

Have the Auxiliary Engines been constructed under special survey YES

Is a report sent herewith YES, DUISSELDORF RPT 333

W 387-0011

AIR RECEIVERS:—Have they been made under survey YES ✓ State No. of Report or Certificate DÜSSELDORF CERT. 30
Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES ✓
Can the internal surfaces of the receivers be examined and cleaned YES ✓ Is a drain fitted at the lowest part of each receiver YES ✓
Injection Air Receivers, No. 2 Cubic capacity of each 2 x 400 Ltrs Internal diameter 500 mm thickness 14 mm
Seamless, lap welded or riveted longitudinal joint LAP WELDED Material S.M. STEEL Range of tensile strength 38.9/41.6 kg/mm² Working pressure 32.8
Starting Air Receivers, No. 2 Total cubic capacity 2 x 400 Ltrs Internal diameter 500 mm thickness 14 mm
Seamless, lap welded or riveted longitudinal joint LAP WELDED Material S.M. STEEL Range of tensile strength 38.9/41.6 kg/mm² Working pressure 32.8

IS A DONKEY BOILER FITTED? YES ✓ If so, is a report now forwarded? YES ✓
Is the donkey boiler intended to be used for domestic purposes only YES ✓
PLANS. Are approved plans forwarded herewith for Shafting 25-1-39; 12-9-39; 18-5-39 Receivers 14-5-39 Separate Fuel Tanks YES ✓
(If not, state date of approval)
Donkey Boilers YES ✓ General Pumping Arrangements 22-5-39 Pumping Arrangements in Machinery Space 6-9-39
Oil Fuel Burning Arrangements YES ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES ✓
State the principal additional spare gear supplied YES ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } SEE BREMEN REPORT.
{ During erection on board vessel - - } 19/8; 5-6-13 19/9; 3-12-16-17-24-25/10; 1-14/11.
Total No. of visits 13
Dates of Examination of principal parts—Cylinders YES ✓ Covers YES ✓ Pistons YES ✓ Rods YES ✓ Connecting rods YES ✓
Crank shaft YES ✓ Flywheel shaft YES ✓ Thrust shaft 30-8-39 Intermediate shafts YES ✓ Tube shaft YES ✓
Screw shaft 11-9-39 Propeller 19-9-39 Stern tube 8-9-39 Engine seatings 13-9-39 Engines holding down bolts 23-10-39
Completion of fitting sea connections 19-9-39 Completion of pumping arrangements 25-10-39 Engines tried under working conditions 1-11-39
Crank shaft, Material YES ✓ Identification Mark YES ✓ Flywheel shaft, Material YES ✓ Identification Mark YES ✓
Thrust shaft, Material S.M. STEEL Identification Mark YES ✓ Intermediate shafts, Material YES ✓ Identification Marks YES ✓
Tube shaft, Material YES ✓ Identification Mark YES ✓ Screw shaft, Material S.M. STEEL Identification Mark YES ✓
Identification Marks on Air Receivers Nº 2001/2
LLOYD'S TEST
60 ATM.
W.P. 30 ATM.
V.S. 24-5-39.
SMALL AIR VESSEL
AUX. ENGINE
Nº 3991
LLOYD'S TEST
60 ATM.
W.P. 35 ATM.
H.B. 18-7-39.

Is the flash point of the oil to be used over 150° F. YES ✓
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with YES ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo NO ✓ If so, have the requirements of the Rules been complied with YES ✓
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with NOT DESIRED ✓
Is this machinery duplicate of a previous case YES ✓ If so, state name of vessel SEE BREMEN REPORT.

General Remarks (State quality of workmanship, opinions as to class, &c. THE WORKMANSHIP WAS FOUND GOOD IN EVERY RESPECT AND THE MACHINERY HAS BEEN FITTED IN ACCORDANCE WITH THE APPROVED PLANS AND SECRETARY'S LETTERS AND IN CONFORMITY WITH THE SOCIETY'S RULES.
THE MACHINERY HAS BEEN TRIED UNDER WORKING CONDITIONS AND FOUND TO BE IN GOOD ORDER.
IN MY OPINION THE MACHINERY IS ELIGIBLE FOR THE NOTATION + L.M.C. 10-39.
"OIL ENGINE" IN THE SOCIETY'S REGISTER BOOK.

The amount of Entry Fee .. £. 8.- : When applied for, 14-11-1939
1/3 Special ... £. 98.- :
Donkey Boiler Fee ... £. : When received, 2/11/1940
Travelling Expenses (if any) £. 50.- : R.S.J.

Committee's Minute

Assigned

to Lamb 11.39
or L.S.J.

O.R. Gold. J.W. Williams
Engineer Surveyor to Lloyd's Register of Shipping.



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