

pt. 4b.

nm. 684721

REPORT ON OIL ENGINE MACHINERY.

No. 267

Received at London Office

JUL -7 1938

of writing Report 27.6. 1938 When handed in at Local Office 2.7. 1938 Port of D ü s s e l d o r f

in Survey held at C o l o g n e

Date, First Survey 18.11.1937 Last Survey 24.6. 1938.

Number of Visits 10

on the Single
Twin
Triple
Quadruple
Screw vessel

M. Guidesman

Tons { Gross
Net

uilt at Alblasserdam

By whom built N.V. Industr. M. "De Noord"

Yard No. 571 When built 1938
480646/49

igines made at Cologne

By whom made Humboldt-Deutzmotoren

Engine No. / When made 1938

mkey Boilers made at

By whom made

Boiler No. When made

ake Horse Power 200

Owners

Port belonging to

om. Horse Power as per Rule 47

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

rade for which vessel is intended

L ENGINES, &c.—Type of Engines Heavy Oil Engine SV 4 M 345 2 or 4 stroke cycle 4 Single or double acting single

imum pressure in cylinders 50 kg/cm² Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders 4 No. of cranks 4

ean Indicated Pressure 6.6 kg/cm²

an of bearings, adjacent to the Crank, measured from inner edge to inner edge 307.5 mm

Is there a bearing between each crank yes

evolutions per minute 300 Flywheel dia. 1250 mm Weight 2600 kgs

Means of ignition sol. inject Kind of fuel used on test bed gas oil

rank Shaft, { Solid forged
Semi built dia. of journals as per Rule
All built as fitted 190 mm

Crank pin dia. 170 mm

Crank Webs

Mid. length breadth 325 mm

Thickness parallel to axis shrunk

Mid. length thickness 70 mm

Thickness around eyehole

lywheel Shaft, diameter as per Rule
as fitted

Intermediate Shafts, diameter as per Rule
as fitted 140 mm

Thrust Shaft, diameter at collars as per Rule
as fitted

ube 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 {

ronze 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

opeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

f 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

f 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 not reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

forced Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes ~~water cooled~~ 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. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. one Diameter 100 mm Stroke 85 mm Can one be overhauled while ~~working~~ 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

1 tooth wheel pump
capacity 40 lts./min.
at 1400 rev. per min.

Ballast Pumps, No. and size

Main Engine Driven Lubricating Oil Pumps, including Spare Pump, No. and size

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 the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

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. one

No. of stages

two

Diameters

Stroke

85 mm

Driven by main engine

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter as per Rule
as fitted

No.
Position

Is a report sent herewith

Have the Auxiliary Engines been constructed under special survey

004394-004404-0282

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attached to the copy of this report sent to Rotterdam Surveyors

AIR RECEIVERS:—Have they been made under survey ☒ yes Are reports & certificates now forwarded ☒ yes
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. 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. two Total cubic capacity 2 x 250 lts. Internal diameter 450 mm thickness 12 mm
Seamless, lap welded or riveted longitudinal joint lap welded Material S.M. Steel Range of tensile strength 38/44 kg/cm² Working pressure by Rules Actual 29.9 30 kg/cm²

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 212501 25.2.35 Receivers E. 729 3.12.32 Separate Fuel Tanks
(If not, state date of approval)

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

Identification marks of Air receivers:

No. 1811 1812

LLOYD'S TEST

60 atm.

W.P. 30 atm. ☒

L.S. 25. 1. 38.

The foregoing is a correct description,

Humboldt-Deutzmaschinenfabrik

Aktiengesellschaft

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 18.11.1937, 18.2., 22.4., 11.5., 1.6., 3.6., 10.6., 18.6., 22.6., 24.6.1938.
During erection on board vessel -- }
Total No. of visits
Liners: 1/6, 3/6, 24/6.

Dates of Examination of principal parts—Cylinders 1/6, 3/6 Covers 3/6, 24/6 Pistons 24/6 Rods Connecting rods 22/4, 11/5, 2

Crank shaft 18/11, 10/6, 24/6 Flywheel shaft Thrust shaft Intermediate shafts 18/2, 24/6 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 on test bed 22.6.38.

Crank shaft, Material S.M. Steel Identification Mark 13477 M.B. Flywheel shaft, Material Identification Mark

Thrust shaft, Material Identification Mark 18.11.37. Intermediate shafts, Material S.M. Steel Identification Marks 3356 H.B. 24.6

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 no If so, state name of vessel

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 in accordance with the approved plans and instructions thereto.

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

been tested on the makers' test bed in the presence of the undersigned during 10 hours consecutive

running under full load and 10 % overload and was found to be in safe working condition during the

trials. After the trials all working parts of the engine have been opened out for inspection and

were found in good condition. In my opinion the vessel for which this engine is intended will

be eligible for the notation of + 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 forwarded to the Rotterdam Surveyors.

Additional as per Rm. 43
letter attached .. 22 due Rot } pd hoc 3

The amount of Entry Fee .. £ 77: 40.- When applied for, 1938.

Special ... £ 77: 235.- 6.7. 1938.

Donkey Boiler Fee ... £ : : When received, 18.8. 1938.

Travelling Expenses (if any) £ 77: 40.- 18.8. 1938.

Committee's Minute 20 SEP 1938

Assigned Lee Rot. 27252



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