

Rpt. 4b.

Order No. 454670

## REPORT ON OIL ENGINE MACHINERY

No. 122

25 MAR 6

Date of writing Report 26th Febr. 1936 When handed in at Local Office

Port of Cologne

Date, First Survey 18th January 36 Last Survey 21st Febr. 1936

No. in Survey held at Reg. Book.

Single  
Twin  
Triple  
Quadruple  
Screw vesselTons  
Gross  
Net

Built at

Amsterdam  
Cologne

By whom built

Messrs. Nij To Noord

Yard No. 559

When built 1936

Engines made at

By whom made

Messrs. Humboldt Deutz Motoren AG

Engine No. 14

When made 1936

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power

400

Owners

Port belonging to

Nom. Horse Power as per Rule

94.8

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &amp;c.—Type of Engines Heavy Oil Engine 2 1/2 stroke cycle four Single or double acting single

Maximum pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 304.5 mm Is there a bearing between each crank Yes

Revolutions per minute 300 Flywheel dia. 1250 mm Weight 2600 kg Means of ignition Solid injected Kind of fuel used

Crank Shaft, dia. of journals as per Rule 190 mm Crank pin dia. 140 mm Crank Webs Mid. length breadth 339 mm Thickness parallel to axis

as fitted 190 mm Mid. length thickness 40 mm Thickness around eye-hole

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 fitted Is the tube shaft fitted with a continuous liner

as fitted 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 reversible Is a governor or other arrangement fitted to prevent racing of the engine when decoupled Yes Means of lubrication

by pressure Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material water 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

What special arrangements are made for dealing with cooling water if discharged into bilges

Bilge Pumps worked from the Main Engines, No. one Diameter 100 mm Stroke 85 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size How driven

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size North wheel pump and 1 spare

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 In Pump Room

In Holds, &amp;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. one No. of stages Two Diameters 145 mm/60 mm Stroke 85 mm Driven by main engines

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

Auxiliary Engines crank shafts, diameter as per Rule Position —

as fitted 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 (If not, state date of approval)

13 February 1935

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

## SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes. State the principal additional spare gear supplied 1 complete fuel valve, 2 sets of suction and delivery valves of the fuel pumps. 8 caans for the fuel pumps, 2 rams for fuel pumps and an assortment of springs, fuel needles etc. as ordered by the owners.

The foregoing is a correct description.

Humboldt-Deutzmotoren

Manufacturer.

Dates of Survey while building

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

8th. 1. 36. - 7th. - 14th. - 19th. - and 21st. February 1936.  
Five.

Dates of Examination of principal parts—Cylinders

8. 1. 36. Covers 8. 1. 36. Pistons 8. 1. 36. Rods

Connecting rods 7. 2. 36.

Crank shaft

7. 2. 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. S. A.

Identification Mark 10318, 10. 1. 36.

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks 16266

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

If so, have the requirements of the Rules been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

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.)

The engines are built in accordance with the approved plans and the requirements embodied in the Secretary's letter of the 13th February 1935, and otherwise in accordance with the requirements of the Rules. Materials and workmanship are of best quality the outfit is ample. The engines have been tested under full working and manoeuvring conditions for about six hours on the trial stage in machine shop and has given full satisfaction. After trial all working parts have been opened up and were found on examination in good condition. This machinery has been built under special survey and will be fitted on board the vessel No. 559 in construction at Messrs. Ny De Noord of Alblaswerdham. In my opinion this machinery is illegible for notation.

\* include

for R.M.

95

aps. 8

on 103

due to

Rotterdam

P.

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

Committee's Minute

Assigned

When applied for,

When received,

20-3-1936

Engineer Surveyor to Lloyd's Register of Shipping.



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See Rob. J.E. 24566

TUE. 16 JUN 1936