

Rpt. 4b.

538 REPORT ON OIL ENGINE MACHINERY.

No. 13640

Received at London Office

29 FEB 1936

Date of writing Report 22 February 1936 When handed in at Local Office

Port of Amsterdam

No. in Survey held at
Reg. Book.

Amsterdam

Date, First Survey 16 Sept

Last Survey 10 February 1936

Number of Visits 23

Single
on the Twin
Triple
Quadruple

Screw vessel M.V. "Pentecola"

Tons
Gross
Net

Built at Rumpen 2/4 yds By whom built C. v. d. Gussen

Yard No. 639 When built 1936

Engines made at Amsterdam By whom made N. V. Werkspoor

Engine No. 666 When made 1936

Donkey Boilers made at Amsterdam By whom made N. V. Werkspoor

Boiler No. 2729 When made 1936

Brake Horse Power 2 x 300

Owners

Port belonging to

Nom. Horse Power as per Rule 162

Is Refrigerating Machinery fitted for cargo purposes 1

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Diesel Solid injection 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 45 kg Diameter of cylinders 300 mm Length of stroke 400 mm No. of cylinders 2 x 6 No. of cranks 6

Span of bearings, adjacent to the Crank measured from inner edge to inner edge 370 mm Is there a beating between each crank yes

Revolutions per minute 200 Flywheel dia. 1100 mm Weight 1250 kg Means of ignition solid injection Kind of fuel used crude oil

Crank Shaft, dia. of journals as per Rule 100 mm as fitted 220 mm Crank pin dia. 100 mm Crank Webs Mid. length breadth 30 mm Thickness parallel to axis shrunk Thickness around eyehole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 170 mm Thrust Shaft, diameter at collars as per Rule as fitted on crankshaft 220 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 175 mm Is the tube shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule as fitted 15 mm Thickness between bushes as per rule as fitted 13 mm Is the after end of the liner made watertight in the

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

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 m If so, state type Length of Bearing in Stern Bush next to and supporting propeller 716 mm

Propeller, dia. 1790 mm Pitch 1295 mm No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 4055

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 24 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material 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. 2 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. 2 Diameter 130 mm Stroke 90 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line No. and Size 1 General service pump 7 1/2" x 6" x 10" How driven Steam driven

Ballast Pumps, No. and size general service 7 1/2" x 6" x 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 Auxiliary 10 ton 4" x 3" x 4"

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, &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. none No. of stages 1 Diameters 57-127 mm Stroke 90 mm Driven by steam engine

Auxiliary Air Compressors, No. one No. of stages 2 Diameters 57-127 mm Stroke 90 mm 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 —

AIR RECEIVERS:—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

High Pressure Air Receivers, No. none Cubic capacity of each Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure Actual

Starting Air Receivers, No. 2 Total cubic capacity 3 m³ Internal diameter 600 mm thickness 15 mm

Seamless, lap welded or riveted longitudinal joint Seamless Material SM 8 Range of tensile strength 46 kg/cm² Working pressure Actual 30 kg

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 *E 4-9-25 & 30-9-25* Receivers *E 22-10-25* Separate Tanks *E 30-12-25*
(If not, state date of approval)
Donkey Boilers *E 13-9-25* General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,

WERKSPOR N.V.

Manufacturer.

Dates of Survey while building
During progress of work in shops-- *Sept 16-23 Oct 9-16 Nov 13-25 Dec 6-17-19-30 Jan 6-10-13-14-16-21-23-29 Feb 5-10*
During erection on board vessel--
Total No. of visits

Dates of Examination of principal parts—Cylinders *25 Nov 6 Dec* Covers *25 Nov 1925* Pistons *25 Nov 1925* Rods *25 Nov 1925* Connecting rods *19-20-10-25*

Crank shaft *23 Sept 26 Oct 10 Jan* Flywheel shaft *25 Nov 1925* Thrust shaft *25 Nov 1925* Intermediate shafts *25 Nov 1925* Tube shaft *25 Nov 1925*

Screw shaft *17-12-25* Propeller *13-1-26* Stern tube *25 Jan 1926* Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material *SMS* Identification Mark *1766-1767 440403 HPS 17-12-25* Flywheel shaft, Material Identification Mark *1835-1836 440403 HPS 17-1-26*
Thrust shaft, Material Identification Mark Intermediate shafts, Material *SMS* Identification Marks *1800-1801 440403 HPS 6-1-26*
Tube shaft, Material Identification Mark Screw shaft, Material *SMS* Identification Mark

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

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The engines have been made under special survey in accordance with the rules, approved plans & Secretary's letters
Workmanship throughout good*

The engines have been forwarded to Krumpen & Jøel and will be placed aboard of Messrs. A. G. & Co. 2000 Jarde No 639

A copy of this report have been forwarded to the Rotterdam surveyors.

The amount of Entry Fee *£ 30* When applied for

Special *£ 389* When received

Donkey Boiler Fee

Travelling Expenses (if any) *£ 3.50* *13-3 19-36* *13/3*

Committee's Minute

Assigned

+ L.M.C. 3.36
oil Eng.

DB. 180 lb.

CL.

B. Krumpen & Jøel
Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation