

REPORT ON OIL ENGINE MACHINERY.

No. 15512 A

Received at London Office JAN 18 1939

Date of writing Report 4 January 1939 When handed in at Local Office

Port of Amsterdam

No. in Survey held at Reg. Book.

Amsterdam

Date, First Survey 4 January 1938 Last Survey 3 January 1939

Number of Visits 63

on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "NIGERSTROOM"

Tons ^{Gross} _{Net}

Built at Krumpen & Ysel By whom built N.V. C.v.d. Guesen & Co Yard No. 656 When built 1938/39

Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. 731 When made 1938/39

Donkey Boilers made at Amsterdam By whom made N.V. Werkspoor Boiler No. 2047 When made 1938

Brake Horse Power 4250 Owners N.V. Hollandse Schoubank Port belonging to Amsterdam

Nom. Horse Power as per Rule 6/8 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Ocean trade

IL ENGINES, &c.—Type of Engines Werkspoor Diesel engine Supercharged or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 50 kg = 700 kg Diameter of cylinders 720 mm Length of stroke 1400 mm No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 0.75 kg = 125 kg

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 922 mm Is there a bearing between each crank Yes

Revolutions per minute 1200 Flywheel dia. 2159 Weight 6500 kg Means of ignition Solid magnet Kind of fuel used Diesel oil

Crank Shaft, ^{Solid forged} ~~Semi built~~ ~~All built~~ dia. of journals as per Rule approved as fitted 500 mm Crank pin dia. 500 mm Crank Webs Mid. length breadth 960 mm Thickness parallel to axis 315 mm shrunk Mid. length thickness 290/315 mm Thickness around eyehole 228

Flywheel Shaft, diameter as per Rule approved as fitted 380 mm Intermediate Shafts, diameter as per Rule approved as fitted 360 mm Thrust Shaft, diameter at collars as per Rule approved as fitted 380 mm

Tube Shaft, diameter as per Rule approved as fitted Screw Shaft, diameter as per Rule approved as fitted 400 mm Is the ^{tube} ~~screw~~ shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule approved as fitted 20 mm Thickness between bushes as per Rule approved as fitted 15 mm Is the after end of the liner made watertight in the propeller boss C.T.

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner C.T.

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 no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1600 mm

Propeller, dia. 4050 mm Pitch 4430/3425 No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 78 sq. feet

Method of reversing Engines by 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 55 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine funnel

Cooling Water Pumps, No. 2 Salt & fresh water Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

Pumps connected to the Main Bilge Line No. and Size three = 50 l/hour, 105 l/hour - 200 l/hour How driven electric

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 one way 200 l/hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 way 40 l/hour

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

protected 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. 2 No. of stages 2 Diameters 8 1/4 x 3 1/2 Stroke 7 Driven by electric

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. one No. of stages one Diameters 40 mm Stroke 60 mm Driven by hand

What provision is made for first Charging the Air Receivers hand compressor to charge one 100 l carbottle

Scavenging Air Pumps, No. each bottom end of cyl Diameter 720 mm Stroke 1400 mm Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule approved as fitted pins 160 mm Journals 180 mm No. 3 Position

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes



002630-002638-0045

AIR RECEIVERS:—Have they been made under survey *Yes* ✓ State No. of Report or Certificate *5172-5173*

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. *2* Total cubic capacity *20 M³* Internal diameter *1395 mm* thickness *23 mm*

Seamless, lap welded or riveted longitudinal joint *welded* Material *SMS* Range of tensile strength *46.0/53.54* Working pressure *420 lbs* by Rules *approved* Actual *420 lbs*

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 *5-11-37* Receivers *5-11-37* Separate Fuel Tanks *3-1-39*
(If not, state date of approval) *21-3-38* *5-5-38*

Donkey Boilers *25-4-38* General Pumping Arrangements *—* Pumping Arrangements in Machinery Space *—*

Oil Fuel Burning Arrangements *20-9-38*

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, WERKSPoor N.V.

M. M. Mademant Manufacturer.

Dates of Survey while building: During progress of work in shops -- *1938 Jan 4-20 Feb 12-24 Mar 7-21 April 5-6-13 May 3-12-19-27 June 8-20-24-28 July 11-13-18-25-26-30 Aug 8-10-16-17-18-23-25-29-30 Sept 1-2-5-7-9-10-12-20-28-29-16 Oct 4-10-14-21-28-31 Nov 1-2-7-8-14-15-20-20 Dec 6-9-12-19-23*
During erection on board vessel --
Total No. of visits *—*

Dates of Examination of principal parts—Cylinders *4/16-18-21* Covers *25 July 16* Pistons *8-10 July 31* Rods *24-15* Connecting rods *3-6*

Crank shaft *16/30* Flywheel shaft *2 Sept 1 Nov* Thrust shaft *15/30* Intermediate shafts *5-30* Tube shaft *—*

Screw shaft *1/2 Nov 2 Dec* Propeller *—* Stern tube *31/6 Oct* 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 *HPB 10-10-30* Flywheel shaft, Material *SMS* Identification Mark *554-16-3-30*

Thrust shaft, Material *SMS* Identification Mark *HPB 1-9-30* Intermediate shafts, Material *SMS* Identification Marks *as per list*

Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *SMS* Identification Mark *5503*

Identification Marks on Air Receivers *5172-5173*
4604 D'S PRESS 620 lbs
WP = 420 lbs
HPB = 29.8-20

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 *no* 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 *no*

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 Machinery has been built under special survey in accordance with the Society's rules & Secretary's letters. Material duly tested. Workmanship throughout good.

The Machinery has been shipped to Krimpen a/d Ysel and will be placed aboard in r. d. Gussen in yard No. 656

The amount of Entry Fee *72*
Special *45* £ *1016*
Air Receivers *100*
Donkey Boiler Fee *—*
Travelling Expenses (if any) *25*

When applied for, *17-1-1939*
When received, *07-2-1939*

B. J. Burgdorff
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI, 21 APR 1939

Assigned

See F12 machy rpt.