

## 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 63Single  
on the Twin  
Triple  
Quadruple

Screw vessel

"NIGERSTROOM"

Tons  
Gross  
Net

Built at Krumpen 7 1/2 Yds

By whom built N.V.C.v.d. Grooten 2<sup>nd</sup>

Yard No. 656 When built 1938/1939

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 618

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

Trade for which vessel is intended Ocean trade

IL ENGINES, &amp;c.—Type of Engines Werkspoor Diesel engine Supacharged 2 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 120 mm

Flywheel dia. 2159

Weight 6500 kg

Means of ignition Solid magnet

Kind of fuel used Diesel oil

Crank Shaft, { Solid forged  
Semi built  
All builtdia. of journals as per Rule approved  
as fitted 500 mm

Crank pin dia. 500 mm

Crank Webs Mid. length breadth 960 mm

Mid. length thickness 290/315 mm

Thrust Shaft, diameter at collars as per Rule approved  
as fitted 300 mmThrust Shaft, diameter at collars as per Rule approved  
as fitted 300 mmFlywheel Shaft, diameter as per Rule approved  
as fitted 380 mmIntermediate Shafts, diameter as per Rule approved  
as fitted 360 mmScrew Shaft, diameter as per Rule approved  
as fitted 400 mmIs the { tube  
screw } shaft fitted with a continuous liner { yesTube Shaft, diameter as per Rule approved  
as fitted 400 mmBronze Liners, thickness in way of bushes as per Rule approved  
as fitted 20 mmThickness between bushes as per Rule approved  
as fitted 15 mm

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 C.I.

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

Length of Bearing in Stern Bush next to and supporting propeller 1600 mm

Propeller, dia. 4050 mm Pitch 4430/3415 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 &amp; 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. 2 Diameter 100 mm Stroke 100 mm

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

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

d 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

That pipes pass through the bunkers

How are they protected

That 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

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

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 air bottle

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 160 mm Journals 180 mm

No. 3 Position

Have the Auxiliary Engines been constructed under special survey yes

Is a report sent herewith yes

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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 M<sup>3</sup>*

Internal diameter *1395 mm*

thickness *23 mm*

Seamless, lap welded or riveted longitudinal joint *welded*

Material *SM5*

Range of tensile strength *46.0/53.54*

Working pressure *by Rules*

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*

(If not, state date of approval) *2-1-38*

Receivers *5-11-37*

Separate Fuel Tanks *3-1-37*

Donkey Boilers *25-4-38*

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements *22-9-38*

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.**

Manufacturer.

Dates of Survey while building

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

1938. Jan 4-10. Feb 12-24. March 7-21. April 5-6-13. May 3-12-19-27. June 8-20-24-28. July 11-13-18-25-26-30. August 8-10-16-17-18-23-25-29-30. Sept 1-2-5-7-9-10-12-20-23-24-26. Oct 4-10-14-21-28-31. Nov 1-2-7-8-14-15-20-22. Dec 6-9-12. Jan 2-3

Dates of Examination of principal parts—Cylinders *4/16-12-21* Covers *25 July* Pistons *8-10 Aug* Rods *24-15 Jan* Connecting rods *3-6 Oct*

Crank shaft *15/10/30* Flywheel shaft *2 Sept/1 Nov* Thrust shaft *15/10/30* Intermediate shafts *5-20 Nov* Tube shaft *—*

Screw shaft *15/10/30* Propeller *—* Stern tube *3/16 Oct* Engine seatings *—* Engines holding down bolts *—*

Completion of fitting sea connections

Completion of pumping arrangements

Engines tried under working conditions

Crank shaft, Material *SM5* Identification Mark *4PB 10-10-30* Flywheel shaft, Material *SM5* Identification Mark *584-16-3-30*

Thrust shaft, Material *SM5* Identification Mark *4PB 1-9-30* Intermediate shafts, Material *SM5* Identification Marks *as per list*

Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *SM5* Identification Mark *5803*

Identification Marks on Air Receivers *5172-5173*

*4404 D'S TEST 620 lbs*

*WP= 420 lbs*

*4PB= 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 Yssel and will be placed aboard in r.d. Gussen in Yard No 656

The amount of Entry Fee *72*

Special

Air Receivers *45/-*

Donkey Boiler Fee *100/-*

Travelling Expenses (if any) *25*

When applied for,

When received,

Committee's Minute

Assigned

FRI, 21 APR 1939

See F12 machy rpt.

*Burgdorff*

Engineer Surveyor to Lloyd's Register of Shipping.



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