

# REPORT ON OIL ENGINE MACHINERY.

No. 28606

Received at London Office

Date of writing Report 5/4 1939 When handed in at Local Office 10 Port of Rotterdam

No. in Survey held at Krimpen ad Yvel Date, First Survey 13 Oct 1930 Last Survey 21 March 1939  
Reg. Book. Number of Visits 15

on the Single Screw vessel M.V. NIGER STROOM Tons <sup>Gross</sup> 4689  
Triple  
Quadruple <sup>Net</sup> 2666

Built at Krimpen ad Yvel By whom built M.V. C. v. d. Giesse Yard No. 656 When built 1939

Engines made at A'dam By whom made N.V. Werkspoor Engine No. 731 When made 1930/9

Donkey Boilers made at A'dam By whom made N.V. Werkspoor Boiler No. 2847 When made 1930

Brake Horse Power 4250 Owners N.V. Hollandsche Stoomboot Port belonging to A'dam

Nom. Horse Power as per Rule 610 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Seagoing trade

**OIL ENGINES, &c.**—Type of Engines Werkspoor Heavy oil engine 2 or 4 stroke cycle 4 Single or double acting single  
please see A'dam report No 15512 A

Maximum pressure in cylinders  Diameter of cylinders  Length of stroke  No. of cylinders  No. of cranks

Mean Indicated Pressure  Span of bearings, adjacent to the Crank, measured from inner edge to inner edge  Is there a bearing between each crank

Revolutions per minute 120 Flywheel dia.  Weight  Means of ignition Compression Kind of fuel used Diesel oil

**Crank Shaft**,  Solid forged  Semi built dia. of journals  as per Rule  as fitted  Crank pin dia.  Crank Webs  Mid. length breadth  Thickness parallel to axis   
 All built  Mid. length thickness  Thickness around eyehole

**Flywheel Shaft**, diameter  as per Rule  as fitted  **Intermediate Shafts**, diameter  as per Rule  as fitted 360 mm **Thrust Shaft**, diameter at collars  as per Rule  as fitted 300 mm

**Tube Shaft**, diameter  as per Rule  as fitted  **Screw Shaft**, diameter  as per Rule  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  as fitted  Thickness between bushes  as per Rule  as fitted  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 one length

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. 4850 mm Pitch 4430/3425 No. of blades 4 Material Brass whether Moveable  no Total Developed Surface 70 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 forged Thickness of cylinder liners  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 & 200 ft/2 fresh 90 ft Is the sea suction provided with an efficient strainer which can be cleared within the vessel  yes

**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 1 & 200 ft, 1 & 105 ft, 1 & 50 ft relay pumps  
How driven electrically

Is the cooling water led to the bilges  no 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 relay 200 ft **Power Driven Lubricating Oil Pumps**, including Spare Pump, No. and size 1 relay 40 ft

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 3 & 4 1/2", 2 & 3 1/4", 1 & 2 3/4" tunnel and 1 & 2 3/4" Cofferdams (2. 114-115)  
In Pump Room " 99-100  
" 66-67 (each)  
" 60-61 (1 & 2)  
" 56-57

**Independent Power Pump Direct Suctions** to the Engine Room Bilges, No. and size 3 & 4 1/2"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-bozes  yes Are the Bilge Suctions in the Machinery Spaces  yes

Are all **Sea Connections** fitted direct on the skin of the ship on steel chests Are they fitted with Valves or Cocks Valves & cocks below and above

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates  yes Are the Overboard Discharges above or below the deep water line  above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel  yes Are the Blow Off Cocks fitted with a spigot and brass covering plate  yes

What pipes pass through the bunkers none How are they protected

What pipes pass through the deep tanks none 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  yes

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  yes Is the Shaft Tunnel watertight  yes Is it fitted with a watertight door  yes worked from top of engine room

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

**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 air compressor to charge 100 l air vessel

**Scavenging Air Pumps**, No.  Diameter  Stroke  Driven by  hand started

**Auxiliary Engines** crank shafts, diameter  as per Rule  as fitted please see A'dam No. 150 BHP, one 52 BHP Eng. No 0590 Position Starb. in engine room

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

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002630-002638-0042

**AIR RECEIVERS:**—Have they been made under survey *yes* ✓ State No. of Report or Certificate ✓  
 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> 100 lbs.* 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?** *yes* ✓ If so, is a report now forwarded? *yes* ✓  
 Is the donkey boiler intended to be used for domestic purposes only *no*

**PLANS.** Are approved plans forwarded herewith for Shafting ✓ Receivers ✓ Separate Fuel Tanks ✓  
 (If not, state date of approval)  
 Donkey Boilers ✓ General Pumping Arrangements *24/10 '30* Pumping Arrangements in Machinery Space *24/10 '30*  
 Oil Fuel Burning Arrangements *20/4 '30*

**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,

Manufacturer.

Dates of Survey while building { During progress of work in shops-- *14/30*  
 { During erection on board vessel-- *Oct 13, Dec 13, 27, Jan 10-10-25-30, Feb 27, March 4-21-24-27-28-29-31.*  
 Total No. of visits *15.*

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓  
 Crank shaft ✓ Flywheel shaft ✓ Thrust shaft *25/1 '29* Intermediate shafts *25/1 '29* Tube shaft ✓  
 Screw shaft *13/12 '30* Propeller *13/12 '30* Stern tube *13/12 '30* Engine seatings *13/12 '30* Engines holding down bolts *25/1 '29*  
 Completion of fitting sea connections *27/12 '30* Completion of pumping arrangements *27/1 '29* Engines tried under working conditions *27/29, 3-39.*  
 Crank shaft, Material ✓ Identification Mark ✓ Flywheel shaft, Material ✓ Identification Mark ✓  
 Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material ✓ Identification Marks ✓  
 Tube shaft, Material ✓ Identification Mark ✓ *spare* Screw shaft, Material *A.M. steel* Identification Mark *LLOYDS 5709 H.P.B. 3-2-39.*  
 Identification Marks on Air Receivers *No 5172/5173 LLOYDS TEST 620 lbs W.P. 420 lbs H.P.B. 29-0-30*  
*No 4549 LLOYDS TEST 60 ATM. W.P. 30 ATM. H.P.B. 14-3-30.*

Is the flash point of the oil to be used over 150° F. *above* ✓  
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *yes* ✓  
 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 *not desired*  
 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 made under special survey in accordance with the approved plans, Society's Rules and Secretary's letters workmanship good, and has been satisfactorily fitted on board. The machinery was found in a good working and manœuvring order when tried under full working condition, and is in my opinion eligible to be classed in the Society's Registerbook + L.M. 24-C.L. and DB100 lbs.*

Certificate (if required) to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £ : : When applied for,  
 Special ... £ *254.-* 19  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ *26.-* 25. 4 19 *398/28/4*

*G. Willemse*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI, 21 APR 1930**  
 Assigned *+ L.M. 4.39 Oil Eng DB 100 lb CL*

