

# REPORT ON OIL ENGINE MACHINERY.

No. 15397  
OCT 6 1938

Received at London Office

Date of writing Report 3 October 1928 When handed in at Local Office

Port of Amsterdam

No. in Survey held at Amsterdam

Date, First Survey 21 January Last Survey 27 Sept 1930

Number of Visits 25

Single }  
Twin }  
Triple }  
Quadruple }  
Screw vessel

## "AFRICA SHELL"

Tons { Gross  
Net

Built at Greenock By whom built George Brown & Co Yard No. 207 When built 1930

Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. 732/3 When made 1930

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 2 x 300 Owners Port belonging to

Nom. Horse Power as per Rule 162 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

**IL ENGINES, &c.** Type of Engines Diesel trunk piston 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 300 mm Length of stroke 480 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 6.1 kg Is there a bearing between each crank Yes

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 360 mm

Revolutions per minute 280 Flywheel dia. 1100 mm Weight 1304 kg Means of ignition Solid inject Kind of fuel used Diesel oil

Crank Shaft, { Solid forged as per Rule approved  
Semi built dia. of journals as fitted 220 mm Crank pin dia. 180 mm Crank Webs Mid. length breadth 300 mm Thickness parallel to axis  
All built Mid. length thickness 95 mm shrunk Thickness around eye hole

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule approved as fitted 220 mm

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

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

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

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 by hand Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

Thickness of cylinder liners 30 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 each engine 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 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  
How driven

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 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2, 3.6 ton/hour

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

ed 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. No. of stages Diameters Stroke Driven by

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

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

What provision is made for first Charging the Air Receivers

Leaving Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position

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



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AIR RECEIVERS:—Have they been made under survey yes State No. of Report or Certificate 4715-4716

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 riveled longitudinal joint \_\_\_\_\_ Material \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Working pressure by Rules  
Actual \_\_\_\_\_

Starting Air Receivers, No. 2 Total cubic capacity 3-M<sup>3</sup> Internal diameter 600mm thickness 15mm  
Seamless, lap welded or riveled longitudinal joint walugas Material SMS Range of tensile strength 41-474 Working pressure by Rules approved  
Actual 30kg/cm<sup>2</sup>

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 cranksh 6-11-37 Receivers 6-11-37 Separate Fuel Tanks \_\_\_\_\_  
(If not, state date of approval)

Donkey Boilers \_\_\_\_\_ General Pumping Arrangements \_\_\_\_\_ Pumping Arrangements in Machinery Space \_\_\_\_\_  
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. [Signature] Manufacturer.

Dates of Survey while building { During progress of work in shops -- } Jan 21 Feb 17 March 16-18-22-25-29 April 29 May 9-13-23-31 June 27  
{ During erection on board vessel -- } July 1-4-6-14-15-20 Aug 8-19-22 Sept 9-27  
Total No. of visits \_\_\_\_\_

Dates of Examination of principal parts—Cylinders 16-22-25 Apr Covers 25-29 April Pistons May 9-13-23-31 Rods \_\_\_\_\_ Connecting rods 1-6 July  
Crank shaft 17 Feb July 8 Aug 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 SMS Identification Mark Cura's 4974-4975 Flywheel shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_  
Thrust shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Intermediate shafts, Material \_\_\_\_\_ Identification Marks \_\_\_\_\_  
Tube shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Screw shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_

Identification Marks on Air Receivers. 4715-4716  
4404 D'S PESP 40.5kg  
WP. 30kg  
HRB. 29-4-30.

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 yes  
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 no If so, state name of vessel \_\_\_\_\_

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

The engines have been built under special survey in accordance with the approved plans. Secretary's letters & the Society's rules. Material duly tested as required. Workmanship throughout good. Engines tested upon completion on bench test under full load found working good.  
The engines have been shipped to Messrs George Brown & Co. Canal Street, Greenock to be placed aboard on their yard No 207.

These engines have been fitted on board at Greenock May 9/2/39.

The amount of Entry Fee £ 26- : When applied for, 5-10-1938  
Special 4/5 fee £ 390- :  
2 Working air receivers 150- :  
Donkey Boiler Fee \_\_\_\_\_ :  
Travelling Expenses (if any) 5- :  
When received, 14<sup>th</sup> Nov. 1938.

Committee's Minute GLASGOW 14 FEB 1939  
Assigned \_\_\_\_\_ SEE ACCOMPANYING MACHINERY REPORT.



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