

# REPORT ON OIL ENGINE MACHINERY.

No. 335316

Received at London Office

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Writing Report 17-4-1951

When handed in at Local Office

19

Port of

Rotterdam

Survey held at Kinderdijk and Halbeek

Date, First Survey 0-4-40

Last Survey 11-4-

1951

Number of Visits 14

Single  
on the Twin  
Triple  
Quadruple

Screw vessel. MV "Nigeria" ex "Oca"

Tons

Gross 499.90

Net 262

By whom built G. Brown (Contracted to)

Yard No.

When built

made at Augsburg

By whom made

Halbeek Augsburg-Kurumb

Engine No. 10900-25 When made 1926

Boilers made at

By whom made

Boiler No. When made

orse Power 500

Owners

N.V. Oca B'dam

Port belonging to Rotterdam

wer as per Rule

111

NAC-107

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

r which vessel is intended

Coasting Service

GINES, &c. —Type of Engines

Heavy Oil Engines type G. 6 V 50

2 or 4 stroke cycle 4

Single or double acting Single

n pressure in cylinders 40 kg/cm<sup>2</sup>

Diameter of cylinders 345 mm

Length of stroke 19 1/2"

No. of cylinders 6

No. of cranks 6

indicated Pressure 6.5 kg/cm<sup>2</sup>

Ahead Firing Order in Cylinders 1-4-2-6-3-5

Span of bearings, adjacent to the crank, measured

er edge to inner edge 450 mm

Is there a bearing between each crank Yes

Revolutions per minute 300

l dia. 150 mm

Weight 1700 kg

Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 2100

Means of ignition Long spark

Kind of fuel used Diesel

Solid forged

Semi built

All built

dia. of journals as per Rule 2.0 mm

as fitted 2.0 mm

Crank pin dia. 2.0 mm

Crank webs

Mid. length breadth 310 mm

Mid. length thickness 110 mm

shrink

Thickness parallel to axis

Thickness around eye-hole

Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as fitted

as per Rule

Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the tube screw shaft fitted with a continuous liner

no

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

boss

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

ner 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-

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

be shaft Yes If so, state type Hollow rubber ring

Length of bearing in Stern Bush next to and supporting propeller 500 mm

r, dia. 1000 Pitch 1140 No. of blades 4 Material Cast iron whether moveable

Total developed surface 56 1/2 sq feet

of inertia of propeller (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 205

Kind of damper, if fitted

of reversing Engines by hand

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

Means of

on fixed Thickness of cylinder liners 15 mm Are the cylinders fitted with safety valves Yes

Are the exhaust pipes and silencers water cooled

l with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

he engine Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

mps worked from the Main Engines, No. 1 Diameter 200 mm Stroke 100 mm Can one be overhauled while the other is at work

connected to the Main Bilge Line No. and size 2" Centrifugal (existing)

How driven Click driven

oling 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

ents

pumps, No. and size 1 Centrifugal (existing) Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 existing

independent means arranged for circulating water through the Oil Cooler Yes

Suctions, connected to both main bilge pumps and auxiliary

aps, No. and size:—In machinery spaces 2.0" + 2.0" aft watertight door (existing) In pump room

&c. 2.0" (existing)

lent Power Pump Direct Suctions to the engine room bilges, No. and size 1.0" (existing)

ie bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes

Are the bilge suction in the machinery spaces led from easily

mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

ea Connections fitted direct on the skin of the Ship on chute Are they fitted with valves or cocks Below

Are they fixed

y 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 Below

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

es pass through the bunkers How are they protected

es pass through the deep tanks Have they been tested as per Rule

ipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

angement 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

from one compartment to another Yes Is the shaft tunnel watertight Yes Is it fitted with a watertight door Yes worked from deck

vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Compressors, No. 1 No. of stages 2 diameters 100 mm stroke 100 mm driven by

Air Compressors, No. 1 No. of stages 2 diameters existing stroke 100 mm driven by Electric driven

iliary Air Compressors, No. 1 No. of stages 1 diameters 95-100 mm stroke 100 mm driven by

vision is made for first charging the air receivers Air engines hand started

ng Air Pumps, No. 1 diameter 100 mm stroke 100 mm driven by

Engines crank shafts, diameter as per Rule

as fitted

Position

auxiliary engines been constructed under special survey

Is a report sent herewith



AIR RECEIVERS:—Have they been made under survey... *no* *Don approved* 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, welded or riveted longitudinal joint... *✓* Material... *✓* Range of tensile strength... *✓* Working pressure... *✓*  
Starting Air Receivers, No. *2* Total cubic capacity... *700 h* Internal diameter... *3.96 m H* thickness... *12 m H*  
Seamless, welded or riveted longitudinal joint... *Seamless* Material... *St Steel* Range of tensile strength... *✓* Working pressure... *✓*

IS A DONKEY BOILER FITTED... *no* 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... *10/10-50* Receivers... *10/10-50* Separate fuel to...  
(If not, state date of approval)  
Donkey boilers... *✓* General pumping arrangements... *✓* Pumping arrangements in machinery space... *✓*  
Oil fuel burning arrangements... *✓*  
Have Torsional Vibration characteristics been approved... *yes* Date of approval... *2-10-50*

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 - -	During erection on board vessel - -	Total No. of visits
	<i>8-20/4-40</i>	<i>8-14/9-50</i>	<i>14</i>
	<i>2/10-19-50</i>	<i>3-21/10-11-12-1950</i>	
		<i>5-21/11-14-1951</i>	

Dates of examination of principal parts—Cylinders... *8-9-40* Covers... *8-4-40* Pistons... *8-4-40* Rods... *8-4-40* Connecting rods... *8-4-40*  
Crank shaft... *20-4-40* Flywheel shaft... *✓* Thrust shaft... *5-2-50* Intermediate shafts... *5-2-50* Tube shaft... *5-2-50*  
Screw shaft... *22-12-50* Propeller... *22-12-50* Stern tube... *24-11-50* Engine seatings... *5-2/50* Engine holding down bolts... *✓*  
Completion of fitting sea connections... *✓* Completion of pumping arrangements... *✓* Engines tried under working conditions... *✓*  
Crank shaft, material... *St Steel* Identification mark... *45-4088/1011* Flywheel shaft, material... *✓* Identification mark... *✓*  
Thrust shaft, material... *St Steel* Identification mark... *AVH/5710 20-12-50* Intermediate shafts, material... *St Steel* Identification marks... *✓*  
Tube shaft, material... *✓* Identification mark... *✓* Screw shaft, material... *St Steel* Identification mark... *✓*  
Identification marks on air receivers... *✓*

Welded receivers, state Makers' Name...

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*

Description of fire extinguishing apparatus fitted... *3 x 2 gallon fire foam apparatus*

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. *This engine has been opened up and completely overhauled and made reversible at the works of the F. K. Smit Kinderdijk under supervision of the Society's and Surveyors. Afterwards the engine has been fitted in the vessel at the de Waal Hallbom. Dimensions found as per approved plans, Secretary's letters and workmanship found good. No alterations have been made to the pumping arrangements in the vessel nor to the donkey engine, compressor, pumps, pumping arrangement, seaconnections all opened out and examined. Engine tried under full working conditions on a trial trip on the river Haas and was found in a good working and manouring condition and in our opinion this vessel meets the requirements of the Society. To be recorded in the Registerbook with the Record of M.B.S. 4-51 N.E (made 1926) Refitted 4-51 O.G.*

The amount of Entry Fee ... £ *622.00*  
Special ... £ :  
Donkey Boiler Fee... £ :  
Travelling Expenses (if any) £ *66.50*

When applied for

*14/4* 19 *51*

When received

19

Engineer Surveyor to Lloyd's Register of

Committee's Minute

Assigned

*MBS 4.51 Oil Eng.*

*E made 1926, refitted 4.51 S(0.6) 351*

TUES. 24 JUL 1951



Lloyd's Register Foundation