

# REPORT ON OIL ENGINE MACHINERY.

92 No. 23<sup>b</sup>  
JUN 15 1938

Received at London Office

Date of writing Report 31-5-1938 When handed in at Local Office

19 Port of Groningen

No. in Survey held at Groningen  
Reg. Book.

Date, First Survey 30-3-'38 Last Survey 30-5-1938  
Number of Visits 12

Single }  
on the Twin } MOTOR  
Triple } Screw vessel  
Quadruple }

"KINGFISHER"

Tons } Gross 275.74  
Net 92.81

Built at Groningen

By whom built Schipwerf "Gideon" Koster's Yard No. 161 When built 1938

Engines made at Cologne

By whom made Humboldt Deutz Motoren & Engine No. 439483/100 When made 1937

Donkey Boilers made at -

By whom made - Boiler No. - When made -

Brake Horse Power 300

Owners The General Steam Navigation Co. Ltd. Port belonging to LONDON.

Nom. Horse Power as per Rule 71

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended sea going trade

OIL ENGINES, &c.—Type of Engines <sup>SEE DUSSELDORF REPORT 201.</sup> Heavy Oil Engine R.V. 61/342 or 4 stroke cycle 4 Single or double acting single

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 Flywheel dia. Weight Means of ignition Kind of fuel used

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

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the screw shaft fitted with continuous liners? no  
as fitted as fitted 130 mm

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  
as fitted 11.5 mm as fitted 130 mm

propeller boss yes rubber ring If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner no fusion separate liners

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 yes

If two liners are fitted, is the shaft lapped or protected between the liners no 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 670 mm

Propeller, dia. 1750 mm Pitch 1090 mm No. of blades four Material Bronze whether Moveable no Total Developed Surface 1.0567 sq. feet

Method of reversing Engines directly by hand Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced

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 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 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. ONE Diameter 100 mm Stroke 85 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size ONE @ 50 Tons/hour and one @ 10 Tons/hour  
How driven 15 B.H.P. auxiliary Deutz Heavy Oil Engine and by main engine

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 3" ROTARY PUMP 50 Tons/hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size two @ 80 lbs/min

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 @ 2" and one @ 2 1/2" In Pump Room

In Holds, &c. 2 @ 2" and two @ 2" in tunnel well (one forward and one aft)

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ONE @ 2 1/2"

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

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks Valves and cocks

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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks one sounding pipe Have they been tested as per Rule yes

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 bridge deck

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. ONE No. of stages two Diameters 14 5/16" Stroke 85 mm Driven by main engine

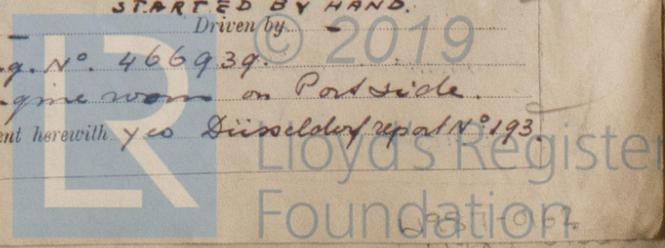
Small Auxiliary Air Compressors, No. ONE No. of stages two Diameters 3 3/4" x 1 1/8" Stroke 3 3/4" Driven by 15 B.H.P. DEUTZ HEAVY OIL ENGINE

What provision is made for first Charging the Air Receivers small auxiliary air compressor driven by 15 B.H.P. HEAVY OIL ENGINE STARTED BY HAND.

Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -

Auxiliary Engines crank shafts, diameter as per Rule No. ONE Eng. No. 466939  
as fitted 75 mm Position In Engine room on Port side

Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith yes Dusseldorf report N° 193



**AIR RECEIVERS:**—Have they been made under survey \_\_\_\_\_ State No. of Report or Certificate \_\_\_\_\_

Is each receiver, which can be isolated, fitted with a safety valve as per Rule \_\_\_\_\_

Can the internal surfaces of the receivers be examined and cleaned \_\_\_\_\_ Is a drain fitted at the lowest part of each receiver \_\_\_\_\_

**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.** *Two* Total cubic capacity *2 x 500 lbs* Internal diameter *450 mm* thickness *12 mm*

Seamless, lap welded or riveted longitudinal joint *lap welded* Material *S.M. Steel* Range of tensile strength \_\_\_\_\_ Working pressure \_\_\_\_\_ by Rules \_\_\_\_\_ Actual *30 kg/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 *23-11-1937* Receivers *60244 28-7-32* Separate Fuel Tanks *9-4-37 Rotterdam*

(If not, state date of approval)

Donkey Boilers \_\_\_\_\_ General Pumping Arrangements *22-2-1938* Pumping Arrangements in Machinery Space *22-2-1938*

Oil Fuel Burning Arrangements *22-2-1938*

**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

*30, 31-3-38; 2, 26-4-38; 6, 10, 20, 23, 24, 25, 27, 30-5-38*

Dates of Examination of principal parts—Cylinders \_\_\_\_\_ Covers \_\_\_\_\_ Pistons \_\_\_\_\_ Rods \_\_\_\_\_ Connecting rods \_\_\_\_\_

Crank shaft \_\_\_\_\_ Flywheel shaft \_\_\_\_\_ Thrust shaft *25-5-38* Intermediate shafts *25-5-38* Tube shaft *✓*

Screw shaft *30-3-38* Propeller *2-4-38* Stern tube *30-3-38* Engine seatings *30-3-38* Engines holding down bolts *25-5-38*

Completion of fitting sea connections *2-4-38* Completion of pumping arrangements *27-5-38* Engines tried under working conditions *30-5-38*

Crank shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Flywheel shaft, Material \_\_\_\_\_ Identification Mark *220406. 154, 156.*

Thrust shaft, Material *S.M. Steel* Identification Mark *220403. 1338* Intermediate shafts, Material *S.M. Steel* Identification Marks *425/E.W. 31-3-38*

Tube shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Screw shaft, Material *S.M. Steel* Identification Mark *220403 440.*

Identification Marks on Air Receivers *N° 1519 LLOYD'S TEST 60 ATM. W.P. 30 ATM. 4.5.15-10-37.*

*N° 1018 LLOYD'S TEST 60 ATM W.P. 30 ATM. V.S. 25-10-37*

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 *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 *✓*

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 fitted in accordance with the approved plans and Secretary's letters.*

*Machinery examined during the trial and found working satisfactory.*

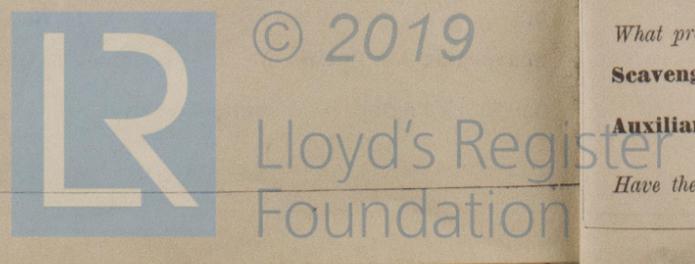
*We are of opinion that this vessel is eligible for notation of + G.M.C. 5-38 oil engine*

The amount of Entry Fee .. £	:	:	When applied for,
Special ... .. £	:	:	19.
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	10	29	2/9 19 38 5/9.

*W. Williams*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 24 JUN 1938*

Assigned *+ Lamb 5-38*  
*oil by*



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