Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 15403

Received at London Office OCT 11 1938

Date of writing Report 6 October 19 38 When handed in at Local Office 19 Port of Amsterdam

No. in Reg. Book. 72526 Survey held at Amsterdam Date, First Survey 1937. 15 June Last Survey 16 October 1938

Number of Visits 32

on the Single / ~~Twin~~ / ~~Triple~~ / Quadruple } Screw vessel "CLAUSINA" Tons { Gross 7987 / Net 4764

Built at Rotterdam By whom built Rotterdam dry dock Yard No. 203 When built 1938

Engines made at Amsterdam By whom made N.V. Werkspoor Engine No. 721 When made 1938

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

Brake Horse Power 3500 Owners Anglo Saxon Petroleum Co Ltd Port belonging to The Hague

Nom. Horse Power as per Rule 502 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Airless injection Supercharged 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 700 lbs Mean Indicated Pressure 110 lbs Diameter of cylinders 650 m/m (25 9/16) Length of stroke 1400 (55 1/8) No. of cylinders 8 No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 844 m/m. Is there a bearing between each crank Yes

Revolutions per minute 110 Flywheel dia. 2260 m/m Weight 6000 kg Means of ignition Solid injection Kind of fuel used Diesel oil

Crank Shaft, { ~~Solid forged~~ / ~~Semi built dia. of journals~~ / All built } as per Rule approved as fitted 460 m/m Crank pin dia. 460 m/m Crank Webs Mid. length breadth 870 m/m Mid. length thickness 290 m/m shrunk Thickness parallel to axis — Thickness around eyehole —

Flywheel Shaft, diameter as per Rule approved as fitted 460 m/m. **Intermediate Shafts,** diameter as per Rule approved as fitted 470 m/m **Thrust Shaft,** diameter at collars as per Rule approved as fitted 460 m/m

Tube Shaft, diameter as per Rule — as fitted — **Screw Shaft,** diameter as per Rule approved as fitted 400 m/m. Is the { tube / screw } shaft fitted with a continuous liner { — / — }

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 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 shaft If so, state type Length of Bearing in **Stern Bush** next to and supporting propeller 1440 m/m.

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface 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 m/m 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

Cooling Water Pumps, No. 3 Salt. 2 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 Rotary Diameter 35 l/m each Stroke 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 1 rotary 40 l/m/hour 1 - 8"x8"x10" duplex

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 led 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

~~Scavenging Air Pumps,~~ Supercharge No. Bottom end each cyl Diameter 650 m/m Stroke 1400 m/m Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule approved. as fitted 110 m/m Kmsrep. 15157 (Krumbholz) No. Position

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

Sent Rot 1/3/38

L.G. 19/10/38

AIR RECEIVERS:—*Have they been made under survey* Yes ✓ *State No. of Report or Certificate* 4632-4633

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* 800 cub feet *Internal diameter* 1495-m/m *thickness* 21 m/m

Seamless, lap welded or riveted longitudinal joint welded *Material* S M S *Range of tensile strength* 30/34 Ton *Working pressure* *by Rules* approved *Actual* 350 LBS

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* E 28-1-37 23-4-37 *Receivers* E 18-1-37. *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,

WERKSPOOR N.V. *Manufacturer.*

Dates of Survey while building

During progress of work in shops-- 1937. June 15. July 8-19-23. Oct 24. Nov. 25 - 1938. Jan 20 - Feb 7. March 26-28-30. April 4-27-28. May 23 July 18 Aug 9-10-12-15-18-19-22-24. Sept 1-2-7-14-23-24-27-28

During erection on board vessel---

Total No. of visits .....

Dates of Examination of principal parts—*Cylinders* 8-10 Aug *Covers* 8-22 Aug *Pistons* 1-7 Sept *Rods* 4 April 7 & 15 Aug *Connecting rods* 4 April 7 Sept

Crank shaft 8 Aug. 2 Sept *Flywheel shaft* 8 Aug 2. Sept *Thrust shaft* 8-10-15 Aug *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 S M S *Identification Mark* L4042.S 1085 S.S. 22-7-38 *Flywheel shaft, Material* S M S *Identification Mark* L4042.S 2915 P.L. 5-11-37

Thrust shaft, Material S M S. *Identification Mark* 5115 H.P.B. 10-7-38 *Intermediate shafts, Material* ..... *Identification Marks* .....

Tube shaft, Material ..... *Identification Mark* ..... *Screw shaft, Material* ..... *Identification Mark* .....

Identification Marks on Air Receivers 4632-4633 Lloyd's cut 550 4BS W.P. 350 4BS H.P.B 4-4-38

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 oil tanker *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 Yes *If so, state name of vessel* M.T. CORYDA" Amsrep. 15355

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

The Machinery has been constructed under special survey to approved plans & Secretary's letters

Material duly tested, workmanship throughout good

The Machinery has been shipped to Rotterdam and will be refitted aboard. Rotterdam drydock Jand Nr 203.

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	£ 72:—	When applied for,	10-10-1938
Special 4/5 fee	£ 960 —		
Donkey Boiler Fee	£	When received,	31-10-38
2 Air receivers	£ 100 —		
Travelling Expenses (if any)	£ 11 —		£ 1141 11.

Committee's Minute FRI 18 NOV 1938

Assigned See 1st 12 machy rpt.

Engineer Surveyor to Lloyd's Register of Shipping.