Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 27514

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Date of writing Report 31.10.1938 When handed in at Local Office 19 Port of Rotterdam

No. in Reg. Book. Survey held at Date, First Survey 14.3.38 Last Survey 25-10-1938 Number of Visits 51

on the Single / ~~Twin~~ / ~~Triple~~ / ~~Quadruple~~ Screw MV vessel "CLAUSINA" Tons Gross 8028 Net 4721

Built at Rotterdam By whom built Rott Droogd Mij Yard No. 203 When built 1938

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

Donkey Boilers made at Rotterdam By whom made Rott Droogd Mij Boiler No. When made 1938

Brake Horse Power 3500 Owners Port belonging to

Nom. Horse Power as per Rule 3502 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Carrying petroleum in bulk

OIL ENGINES, &c.—Type of Engines Solid injection Supercharged Diesel 4 stroke cycle 4 Single or double acting single

Please see Amsterdam Report No. 15403.

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 / All built dia. of journals as per Rule — as fitted — Crank pin dia. — Crank Webs Mid. length breadth — Mid. length thickness — shrunk Thickness parallel to axis — Thickness around eyehole —

Flywheel Shaft, diameter as per Rule — as fitted — **Intermediate Shafts,** diameter as per Rule ~~approved~~ 470 mm as fitted 470 mm **Thrust Shaft,** diameter at collars as per Rule approved 460 mm as fitted 460 mm

Tube Shaft, diameter as per Rule — as fitted — **Screw Shaft,** diameter as per Rule ~~approved~~ 400 mm as fitted 400 mm Is the ~~tube~~ / screw shaft fitted with a continuous liner —

Bronze Liners, thickness in way of bushes as per Rule ~~approved~~ 20 mm as fitted 20 mm Thickness between bushes as per Rule approved 15 mm as fitted 15 mm 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 1690 mm

Propeller, dia. 15' Pitch No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 72 sq. feet

Method of reversing Engines — Is a governor or other arrangement fitted to prevent racing of the engine when declutched — 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 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. 4 2 for cylinders 2 for pistons 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. 2 ~~Diameter~~ 55 tons 3/4 Stroke — " Can one be overhauled while the other is at work Yes

Pumps connected to the **Main Bilge Line** No. and Size Two à 55 tons 3/4 (One 8 x 8 x 10") / How driven Main Engine Steam

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 à 8 x 8 x 10' **Power Driven Lubricating Oil Pumps,** including Spare Pump, No. and size One à 55 tons 3/4 One à 8x8x10"

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 à 3½" - 1 à 6¼" - 1 à 5" In Pump Room 1 à 3½"

In Holds, &c. 1 in Coffendam frame 25-24½ 19-20 à 4". 1 in forehold above deep tank à 50 mm. forward coffendam 3 à 90 mm

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 à 5" 1 à 6¼" One à 50 mm in tunnel aft abaft forepeak.

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 Yes

Are all **Sea Connections** fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both.

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 One coffendam suction. How are they protected Heel pipes with valves to forward and aft Bulkhead controlled from deck.

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 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 Mach aft. 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. 2 No. of stages 2 Diameters 184 - 206 mm Stroke 160 mm Driven by One Hearn Engine One Burton and Hornsby Engine 41 H.P. 84 H.P.

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, No. — Diameter — Stroke — Driven by —

Auxiliary Engines crank shafts, diameter as per Rule — as fitted — No. — Position —

Have the Auxiliary Engines been constructed under special survey Yes (Rotterdam) Is a report sent herewith —

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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* 800 cub feet *Internal diameter* 1495 m/m *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* All forwarded *Boilers* ~~by~~ Amsterdam *Separate Tanks* ~~by~~ *(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 Yes

State the principal additional spare gear supplied Cast iron propeller, screw shaft and further as per owners specification

DE ROTTERDAMSCHE DROOGDOK MIJ. Directeur

The foregoing is a correct description,

Manufacturer. K. C. Robert

Dates of Survey while building

During progress of work in shops – 17/5/4 27/4 28/4 3/5 6/5 9/5 12/5 13/5 16/5 18/5 13/6 17/6 20/6 21/6 25/6 2/9

During erection on board vessel – 27/6 29/6 9/7 19/7 20/7 22/7 27/7 2/8 4/8 10/8 29/8 8/9 9/9 13/9 22/9 28/9 4/10 5/10 7/10 10/10 8/10 12/10 13/10 14/10 15/10 17/10 18/10 22/10 25/10

Total No. of visits 45

Dates of Examination of principal parts—*Cylinders* – *Covers* – *Pistons* – *Rods* – *Connecting rods* –

Crank shaft – *Flywheel shaft* – *Thrust shaft* – *Intermediate shafts* 25.6.38 *Tube shaft* –

Screw shaft 15/6 17/6 19/6 25/6 38 *Propeller* 19.6.38 *Stern tube* 21.6.38 *Engine seatings* – *Engines holding down bolts* 12.10.38

Completion of fitting sea connections – *Completion of pumping arrangements* 22.10.38 *Engines tried under working conditions* 25.10.38

Crank shaft, Material – *Identification Mark* – *Flywheel shaft, Material* – *Identification Mark* –

Thrust shaft, Material S.M. Steel *Identification Mark* LLOYDS H.P.B. 10.8.38 *Intermediate shafts, Material* S.M. Steel *Identification Marks* LLOYDS No 17104 L.S. 25.6.38

Tube shaft, Material – *Identification Mark* – *Screw shaft, Material* S.M. Steel *Identification Mark* LLOYDS No 17205 A.V.H. 25.6.38

Identification Marks on Air Receivers See Amsterdam report Spare. LLOYDS No 17351 L.S. 6.38

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 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 Not required

Is this machinery duplicate of a previous case Yes *If so, state name of vessel*

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been made and fitted in accordance to the Society's Rules, approved plans and Secretary's letters, material tested as required and workmanship good. The whole was found in a good working and manoeuvring condition during a trial trip and I am of opinion that this vessel is eligible to be recorded in the Society's Register Book with +LMC 10-38 Oil Eng. C.L.

Certificate (if required) to be sent to Rotterdam Office

(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	£ 150.00	12.11.1938	
Donkey Boiler Fee ...	£ : :	When received,	
Travelling Expenses (if any)	£ 35.00	12/12 1938	

Committee's Minute FRI 18 NOV 1938 JMK 3/12.

Assigned +LMC 10.38 DB 180 lb Oil Eng

J. J. Schoo *Chief Surveyor to Lloyd's Register of Shipping.*