

REPORT ON OIL ENGINE MACHINERY.

No. 27832⁶

Received at London Office FEB 14 1939

Date of writing Report 7/2 1939 When handed in at Local Office 19 Port of Rotterdam

No. in Survey held at leg. Book. Date, First Survey 12th of May 30 Last Survey 6 Feb 1939
Number of Visits 10.

on the Single Triple Quadruple Screw vessel M.V. " CITRINE " Tons { Gross 783 Net 416.

Built at " Hardinavela " By whom built M. Schuytboef, de Meuwede Yard No. 306 When built 1930-9.
503647/52

Engines made at Cologne By whom made Humboldt-Deutzmaschinen A.G. Engine No. When made 1930.

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

Brake Horse Power 825 Owners Messrs. William Robertson Port belonging to Glasgow.

Nom. Horse Power as per Rule 144 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Seagoing service.

II. ENGINES, &c.—Type of Engines Steam engine RV 614266. 2 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 273 Flywheel dia. Weight Means of ignition Kind of fuel used Diesel oil

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

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 as fitted 190 mm

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the { tube screw } shaft fitted with a continuous liner { }
as fitted as fitted 184/190/170 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 as fitted 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 no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 810 mm

Propeller, dia. 2200 mm Pitch 1480 mm No. of blades 4 Material bronze whether Moveable no Total Developed Surface 1.77 M²

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

forged Thickness of cylinder liners Are the cylinders fitted with safety valves yes Are the exhaust pipes and 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. 2 12200 x 120 mm 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 200 Stroke 120 Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size 1 rotary 200 1/2 } 1 rotary 50 1/2 } 12200 x 120 mm }
How driven Electrically } Electrically } 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 1 200 1/2 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 2 115 lb/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 2 2 3" + 2 2 1/2" In Pump Room

In Holds, &c. 2 2 3" + 2 2 1/2" 2" hand pump for peak flat.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 2 3"

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 on steel chests Are they fitted with Valves or Cocks valves.

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 none How are they protected

What pipes pass through the deep tanks none 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 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 main engine

Small Auxiliary Air Compressors, No. 2-2 cyl No. of stages 2 Diameters 60/150 mm Stroke 90 mm Driven by aux engines

What provision is made for first Charging the Air Receivers hand air compressor charging 30 l air vessel.

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted Position No. 3 2 2 60 BHP } 1 2 10 BHP. H.K. 55. }
 Driven by

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

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. *4* Total cubic capacity *4x500* Internal diameter *✓* thickness *✓*
 Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure by Rules *✓* Actual *✓*

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 *6/4 '30* Receivers *✓* Separate Fuel Tanks *8/5 '30*
 (If not, state date of approval) Donkey Boilers *✓* General Pumping Arrangements *2/1 '30* Pumping Arrangements in Machinery Space *25/6 '30*
 Oil Fuel Burning Arrangements *✓*

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 -- } *May 12, July 7-10, Aug 3, Sept 7, Oct 5 - Nov 22, Dec 14 '30 Jan 6 Feb 6.*
 Total No. of visits *10*

Dates of Examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
 Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *5/6 '30* Intermediate shafts *✓* Tube shaft *✓*
 Screw shaft *23/1 '27/1 '29* Propeller *10/7 '30* Stern tube *27/1 '30/1 '30* Engine seatings *10/7 '30* Engines holding down bolts *6/1 '30*
 Completion of fitting sea connections *10/7 '30* Completion of pumping arrangements *6/2 '30* Engines tried under working conditions *4/2 '30*
 Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*
 Thrust shaft, Material *S.M. steel* Identification Mark *LLOYDS 13955 173 AB 5-8-30* Intermediate shafts, Material *✓* Identification Marks *✓*
 Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S.M. steel* Identification Mark *LLOYDS NO 260 25/7FW 27-7-30*
 Identification Marks on Air Receivers *Nos 2310/13 LLOYDS TEST 60 ATM WP 30 ATM L.S. 7-6-30* *No 2346. LLOYDS TEST 70 ATM WP 35 ATM L.S. 21-6-30.*

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 *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 *not desired.*
 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. *The machinery has been made under special survey in accordance with the approved plans, Society's Rules and Secretary's letters workmanship good, and has been satisfactorily fitted on board. The machinery was found in a good working and manoeuvring order when tried under full working condition and is in my opinion eligible to be classed + L.M.C (1-39) Oilengines in the Society's Registerbook for harbour purposes. The one cylinder 10 BHP aux engine, driving the lightning generator, has not been built under special survey. A crankshaft of tested material ordered from the engine builder has been placed in this engine, same ex^m and found in order. All working parts have been opened out and ex^m the cooling water spaces tested as required and all found in order.*

The amount of Entry Fee .. £ *fee charged* : When applied for, *13. 2. 1939*
 Special *260* .. £ *on 24/1 '30* :
 Donkey Boiler Fee .. £ *192* :
 Travelling Expenses (if any) £ *31.00.* : When received, *London 25/1/1939*

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



Committee's Minute *TUE 28 FEB 1939*
 Assigned *+ dmb 2 '39*
oil eng.

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