

REPORT ON OIL ENGINE MACHINERY.

No. 27660^b

Received at London Office DEC 29 1938

Date of writing Report 23/12 1938 When handed in at Local Office 19 Port of Rotterdam

No. in Survey held at Schiedam Date, First Survey 27th July 1938 Last Survey 20th Dec 1938
Reg. Book. Number of Visits 17

on the Single Screw vessel M.V. "CRISTA" Tons Gross 2590
Triple
Quadruple Net 1406

Built at Schiedam By whom built Messrs. Wilf. Gusto Yard No. 726 When built 1938

Engines made at Amsterdam By whom made Hork. Wekspoor Engine No. 4151 When made 1938

Donkey Boilers made at Amsterdam By whom made H.V. Wekspoor Boiler No. 2005 When made 1938

Brake Horse Power 1500 Owners The Anglo-Tan Petroleum Co Ltd Port belonging to London

Nom. Horse Power as per Rule 223 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Seagoing trade

OIL ENGINES, &c.—Type of Engines solid inject. supercharged 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 140 Flywheel dia. Weight Means of ignition compression Kind of fuel used Diesel oil

Crank Shaft, Solid forged as per Rule dia. of journals as fitted Crank pin dia. Crank Webs Mid. length breadth shrunk Thickness parallel to axis

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 275 mm Thrust Shaft, diameter at collars as per Rule as fitted 300 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 300 mm Is the tube screw shaft fitted with a continuous liner yes

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 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 tight fit

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 1210 mm

Propeller, dia. 3560 mm Pitch 2054 mm No. of blades 4 Material Bronze whether Moveable no Total Developed Surface 8,964 m²

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 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 up in funnel

Cooling Water Pumps, No. one rotary 100 g/h and one centrifugal pump steam driven 120 g/h 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 rotary 80 g/h Stroke 120 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size 2 rotary 80 g/h } { duplex 8x8x10" } { 4 main } { In pump room 126x6x6 } { 2 1210x8x10" }
{ How driven main engine } { steam driven } { 2 forward pumps 126x6x6 } { steam driven }

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 1 duplex 8x8x10"

Ballast Pumps, No. and size 12 8x8x10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 rotary 60 g/h main engine driven

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 80 mm, 12 100 mm, 12 125 mm, 2 65 mm in gutterway In Pump Room 12 65 mm

In Holds, &c. hold No. 1 2 80 mm, hold No. 2 2 80 mm, forepeak flat 2 2 80 mm, cofferdam 19/20 122"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 12 100 mm, 12 125 mm, 12 25/26 122"

Are all the Bilge Suction pipes in Holds and Trunnel 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 C. steel chests 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 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. one 2 cylind. No. of stages 2 Diameters 184-160 mm Stroke 160 mm Driven by Porter 4 horse engine

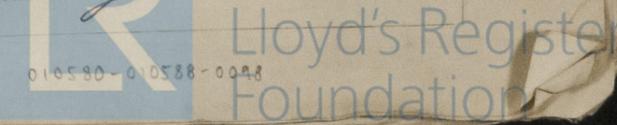
Small Auxiliary Air Compressors, No. one 1 cyl No. of stages 2 Diameters 146-130 mm Stroke 120 mm Driven by steam engine

What provision is made for first Charging the Air Receivers small aux air compressor driven by steam engine

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule Adam report No 15161 as fitted Grimsby report No 20574 Position Starb. aft in engine room Is a report sent herewith yes

Have the Auxiliary Engines been constructed under special survey yes



010580-00588-0098

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

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *Adam report No 15312.*

Is the donkey boiler intended to be used for domestic purposes only *no.*

PLANS. Are approved plans forwarded herewith for Shafting Receivers Separate Fuel Tanks

Donkey Boilers General Pumping Arrangements *19/10 '37* Pumping Arrangements in Machinery Space *19/10 '37*

Oil Fuel Burning Arrangements *1/12 '30*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*

State the principal additional spare gear supplied *As per attached list.*

The foregoing is a correct description,

N.V. WERF GUSTO
v/h Fa. A. F. SMULDERS
Hofweg, d. Raad van Beheer
Manufacturer.

Dates of Survey while building

During progress of work in shops-- *1930.*

During erection on board vessel-- *July 27, Aug 10, Sept 8-13-23, Oct 10-10-20, Nov 1-8-12-18-21-28, Dec 6-20.*

Total No. of visits *16*

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

Crank shaft *Adam report* Flywheel shaft Thrust shaft *1/10 '30* Intermediate shafts *1/10 '30* Tube shaft

Screw shaft *10/8 '30* Propeller *10/8 '30* Stern tube *10/8 '30* Engine seatings *15/9-10/10 '30* Engines holding down bolts *1/10 '30*

Completion of fitting sea connections *9/9 '30* Completion of pumping arrangements *20/12 '30* Engines tried under working conditions *20/12 '30*

Crank shaft, Material *Adam report* Identification Mark Flywheel shaft, Material Identification Mark

Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Identification Marks on Air Receivers *N^o 4713-4714. LLOYDS TEST 441K5 WP 50K5. H.P.B. 19-4-30.*

No 1685. LLOYDS TEST 50 ATM WP 25 ATM. K.K. 14-12-37.

Spare return crankshaft LLOYDS 3192 HPB 1-9-30.

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 *yes* in *jurisdiction* *duplant.* If so, have the requirements of the Rules been complied with *yes.*

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 *yes* If so, state name of vessel *M.V. Antonia.*

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 Surveyor's letters workmanship good, and has been satisfactorily fitted on board. The machinery was found in good working and manufacturing order when tried under full working condition and is in my opinion eligible to be classed + L.M.C 12-30 oil engine DB 180 lbs of C.L. in the Society's Registerbook.

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 .. £ : When applied for,

Special £ *f 135.* : *27.12.1938*

Donkey Boiler Fee £ : When received,

Travelling Expenses (if any) £ *f 27.50.* : *24.1.1939*

H. Williams
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 6 JAN 1939**

Assigned *+ LMC 12.38 CH DB 180 lbs Oil Eng*