

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 20318.

-3 MAR 1937

Date of writing Report 4.1.37 When handed in at Local Office 26<sup>th</sup> FEBRUARY 1937 Port of Greenock  
No. in Survey held at Greenock Date, First Survey 5<sup>th</sup> FEBRUARY 1936 Last Survey 27<sup>th</sup> FEBRUARY 1937  
Reg. Book. Greenock Number of Visits 48  
Single Triple Quadruple on the Greenock vessel M/S "San Calisto" Tons { Gross 8010.20  
Net 4804.43  
Built at Greenock By whom built Lithgow & Co Yard No. 892 When built 1937  
Engines made at Greenock By whom made John Macdonald & Co Engine No. 1196 When made 1937  
Donkey Boilers made at ditto By whom made ditto Boiler No. 1199 When made 1937  
Brake Horse Power 2800 Owners Eagle Oil & Shipping Coy Port belonging to London  
Nom. Horse Power as per Rule 503 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
Trade for which vessel is intended Foreign 25 7/16" 55 1/2"

OIL ENGINES, &c.—Type of Engines Diesel Solid Injection under Port & Starboard or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 600 ✓ Diameter of cylinders 6 5/8" Length of stroke 1400 ✓ No. of cylinders 8 ✓ No. of cranks 8

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

Revolutions per minute 112 ✓ Flywheel dia. 2219 ✓ Weight 2.19 tons Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 436 ✓ Crank pin dia. 460 ✓ Crank Webs Mid. length breadth Thickness parallel to axis 264 ✓

Flywheel Shaft, diameter as per Rule 436 ✓ Intermediate Shafts, diameter as per Rule 12.18 ✓ Thrust Shaft, diameter at collars as per Rule 12.8 ✓

Tube Shaft, diameter as per Rule 18.4 ✓ Screw Shaft, diameter as per Rule 13.5 ✓ Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 42 ✓ Thickness between bushes as per Rule 11.16 ✓ 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 Yes

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 Yes 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 5' 0"

Propeller, dia. 15' 0" ✓ Pitch 15' 0" No. of blades 4 Material Brass whether Moveable No Total Developed Surface 42 ✓ sq. feet

Method of reversing Engines air Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication

Forced Thickness of cylinder liners 40 5/8" 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 Yes

Cooling Water Pumps, No. 2 ✓ 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 Rotary Stroke 3 1/2 tons Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and Size 3 (2 at 3 1/2 tons) } one 8' x 8' x 10'

How driven Main Engine } Auxiliary Engine

Ballast Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size 2 (one 40 tons) one 8' x 8' x 10'

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 at 3 1/2" ✓

In Holds, &c. 2 at 2 1/2" ✓ Tanks 2 8" ✓ Pump Room 4. 3" ✓ Cofferdam 2. 3" ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two 6" ✓

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 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 Yes

What pipes pass through the deep tanks Yes ✓ 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 How fitted ✓ Is it fitted with a watertight door Yes ✓ 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 Yes

Main Air Compressors, No. Two ✓ No. of stages 2 PA ✓ Diameters 5' 11" ✓ Stroke 4 ✓ Driven by Steam Engine

Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —

Small Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —

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

Auxiliary Engines crank shafts, diameter as per Rule ✓

IR RECEIVERS:—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 Yes ✓ What means are provided for cleaning their inner surfaces Manhole

Is there a drain arrangement fitted at the lowest part of each receiver Yes ✓

High Pressure 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 — ✓

Starting Air Receivers, No. 2 ✓ Total cubic capacity 800 CF ✓ Internal diameter 5' 10 1/4" ✓ thickness 15/16" ✓

Seamless, lap welded or riveted longitudinal joint TRIDBS ✓ Material S ✓ Range of tensile strength 29.33 ✓ Working pressure by Rules 357 ✓

Riveted

W463-10063



IS A DONKEY BOILER 5 FITTED? yes

If so, is a report now forwarded? yes

PLANS: Are approved plans forwarded herewith for Shafting yes  
(If not, state date of approval)

Receivers yes

Separate Tanks yes

Donkey Boilers yes

General Pumping Arrangements yes

Oil Fuel Burning Arrangements yes

SPARE GEAR

as per Rule

one Propeller shaft with continuous turn complete stamped  
LR 6238 WGM 2.11.36 one Cast Iron Propeller, 2 Gliders  
turn & heads complete

The foregoing is a correct description,  
For JOHN G. KINCAID & CO. LIMITED.

W. G. Kincaid

Director.

Manufacturer.

Dates of Survey while building  
During progress of work in shops - (1936) FEB. 5-26 MAR. 24 APRIL 8-22 MAY 14-28 JUNE 11-15 22-25 26-29 JULY 15-28 30-31 AUGUST 14-16 SEPT. 9-15 22-24 25 OCT. 2-5 6-8 9-12 13-16 19-21 22-24 29  
During erection on board vessel - 30-31 Nov. 2-4 6-11 13-16 18-20 21-24 30 DEC. 2-4 10-11 14-18 21  
(1934) JAN. 11-13 18-20 24-29 FEB. 1-3 4-9 16-19 22-24 25-26 29  
Total No. of visits 48

Dates of Examination of principal parts - Cylinders 5-10-36 Covers 6-10-36 Pistons 24-10-36 Rods 21-12-36 Connecting rods 24-10-36

Crank shaft 9-9-36 Flywheel shaft ✓ Thrust shaft 4-8-36 Intermediate shafts 2-11-36 Tube shaft ✓

Screw shaft 26-10-36 Propeller 26-10-36 Stern tube 21-10-36 Engine seatings 10-12-36 Engines holding down bolts 4-2-37

Completion of fitting sea connections 14-12-36 Completion of pumping arrangements 17-2-37 Engines tried under working conditions 27-2-37

Crank shaft, Material S Identification Mark LR 6021 WGM Flywheel shaft, Material ✓ Identification Mark ✓

Thrust shaft, Material S Identification Mark LR 6328 WGM Intermediate shafts, Material S Identification Marks LR 6328 WGM

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material S Identification Mark LR 6328 WGM

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 ✓

Is this machinery duplicate of a previous case yes If so, state name of vessel S/Sau Courado "Ex Rpt 20240"

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers have been

built under Special Survey in accordance with the approved plan  
& the workmanship & material are of good quality, they have  
been securely fitted on board, tried under working conditions  
& found satisfactory

The Machinery is eligible in my opinion for the record  
of L.M.C. 2-37 (Notation of Donkey Boilers 180lb)

The amount of Entry Fee ... £ 6 : - : When applied for,

Special ... £ 100 : 3 : 26 FEBRUARY 1937

Donkey Boiler Fee ... £ 22 : 10 : When received,

Aut. Renewal ... £ 8 : 8 : 1.3.1937

Committee's Minute GLASGOW 2-MAR 1937

Assigned + L.M.C. 2,37

2 DB-180lb

W. Gordon Sinclair  
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation

GLASGOW

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