

## REPORT ON OIL ENGINE MACHINERY.

No. 20699

FEB 22 1939

Received at London Office

Date of writing Report 21.12.38 When handed in at Local Office 16<sup>th</sup> FEB 4 1939 Port of London

No. in Survey held at London Date, First Survey 25<sup>th</sup> JULY 1938 Last Survey 15<sup>th</sup> FEBRUARY 1939

Reg. Book. Single on the Triple Screw vessel M/S 'San Eliseo' Tons { Gross 804.54 Net 448.59

Built at London By whom built Lithgow & Co Yard No. 916 When built 1939

Engines made at Greenock By whom made John & Macdonald & Co Engine No. 7123 When made 1939

Donkey Boilers made at ditto By whom made ditto Boiler No. 7123 When made 1939

Brake Horse Power 2000 Owners Eagle Oil Shipping Co Ltd 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

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

Maximum pressure in cylinders 60 lbs Diameter of cylinders 25 3/8 6 5/8 m. Length of stroke 14 00 m. No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 118 lb at 114 Rev Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 8 1/4 m. Is there a bearing between each crank Yes

Revolutions per minute 112 Flywheel dia. 22 1/8 Weight 2.19 tons Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, { Solid forged dia. of journals as per Rule 44 1/8 m. as fitted 460 m. Crank pin dia. 460 m. Crank Webs Mid. length breadth 650 m. shrunk Thickness parallel to axis 26 1/2 m. Mid. length thickness 26 1/2 m. Thickness around eye hole 20 5/8 m. All built

Flywheel Shaft, diameter as per Rule 44 1/8 m. as fitted 18 1/4 Intermediate Shafts, diameter as per Rule 12 3/8 as fitted 24 Thrust Shaft, diameter at collars as per Rule 13.006 as fitted 18 1/4

Tube Shaft, diameter as per Rule 13.699 as fitted 18 Is the { tube } shaft fitted with a continuous liner { Yes }

Bronze Liners, thickness in way of bushes as per Rule 7/8 as fitted 1 1/16 Thickness between bushes as per Rule 5/4 as fitted 1 1/16 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 Yes

shaft No If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 5-0

Propeller, dia. 15-9 Pitch 11-3 No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 83 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 Force

Thickness of cylinder liners 40/48 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 Funnel

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 Stroke 35 Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and Size 3 } { 2 at 35 ton/hr } one 8" x 8" x 10" How driven Main Engine Steam Engine

Is the cooling water led to the bilges Yes 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 None Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2. 8" x 8" x 10" one Roller

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 Pump Rooms 3-3"

In Holds, &c. 2-2" Cargo tanks 8" x 10" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-6"

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 —

What pipes pass through the deep tanks None 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 None 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 5" x 11" Stroke 4" Driven by Steam

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

What provision is made for first Charging the Air Receivers Steam driven compressor

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

Auxiliary Engines crank shafts, diameter as per Rule — as fitted — Position —

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



# AIR RECEIVERS:—Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

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

Starting Air Receivers, No.

2

Total cubic capacity

800 Cu/FT

Internal diameter

5-10 1/4"

thickness

15/16"

Seamless, lap welded or riveted longitudinal joint

TR+DBS

Material

S

Range of tensile strength

29.33

Working pressure

by Rules

254 lbs

Actual

350 lbs

## 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

(If not, state date of approval)

yes

Receivers

yes

Separate Fuel Tanks

yes

Donkey Boilers

yes

General Pumping Arrangements

yes

Pumping Arrangements in Machinery Space

yes

Oil Fuel Burning Arrangements

yes

## SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes

State the principal additional spare gear supplied

one Propeller shaft fitted with continuous Livers + standard LR 3386 W.G.M 15-12-38 also 600-Hou Propeller

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

Director, Manufacturer.

Dates of Survey while building { During progress of work in shops - (1938) JULY 25 29 AUG 2 12 SEPT 1 2 19 21 23 29 30 OCT 4 6 10 11 14 19 20 21 24 26 31 NOV 3 4 9 11 14 16 19 21 22 23 24 25  
During erection on board vessel - 28 29 DEC 5 4 9 12 13 14 15 16 20 21 26 (1939) JAN 12 13 19 20 23 25 FEB 8 14 15  
Total No. of visits 59

Dates of Examination of principal parts—Cylinders 17-11-38 Covers 23-11-38 Pistons 21-11-38 Rods 23-12-38 Connecting rods 21-12-38

Crank shaft 21-12-38 Propeller shaft 21-12-38 Thrust shaft 16-12-38 Intermediate shafts 16-12-38 Tube shaft

Screw shaft 3-11-38 Propeller 3-11-38 Stern tube 29-9-38 Engine seatings 14-10-38 Engines holding down bolts 25-1-39

Completion of fitting sea connections 15-12-38 Completion of pumping arrangements 8-2-39 Engines tried under working conditions 15-2-39

Crank shaft, Material S Identification Mark LR 6518 W.G.M Propeller shaft, Material S Identification Mark LR 6518 W.G.M

Thrust shaft, Material S Identification Mark LR 9445 W.G.M Intermediate shafts, Material S Identification Marks LR 3418 W.G.M

Tube shaft, Material S Identification Mark Screw shaft, Material S Identification Mark LR 3405 W.G.M

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

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

yes

Is this machinery duplicate of a previous case

no

If so, state name of vessel

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 plans and the workmanship + material are of good quality. They have now been securely fitted on board, and under working conditions found satisfactory.

The machinery is eligible in my opinion for the record of  $\pm$  LMC 2-39 (Notation of Donkey Boilers w.p. 180 lbs)

The amount of Entry Fee £ 6 : - : When applied for,  
Special ... £ 100 : 3 : 16th FEB 1939  
Donkey Boilers Fee ... £ 25 : 3 :  
Travelling Expenses (if any) £ 8 : 8 : 20/2/1939

Committee's Minute GLASGOW 21 FEB 1939

Assigned 7th Dec 2.39

one Eng. 200 B. 180 lbs.

W. Gordon-Munroe

Engineer Surveyor to Lloyd's Register of Shipping.



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