

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 16th FEB 1939 Port of Remuak

No. in Survey held at Remuak Date, First Survey 25th JULY 1938. Last Survey 15th FEBRUARY 1939
Reg. Book. Number of Visits 59

on the Single Double Triple Quadruple Screw vessel M/S 'San Eliseo' Tons {Gross 804.54
Net 448.91.
Built at London By whom built Lithgow & Co Yard No. 916 When built 1939
Engines made at Greenock By whom made John & Macrae & Co Engine No. 1713 When made 1939
Donkey Boilers made at ditto By whom made ditto Boiler No. 1723 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 Pressure or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 60 lbs Diameter of cylinders 25 3/16 650 mm. Length of stroke 55 3/8 1400 mm. 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 844 mm Is there a bearing between each crank Yes
Revolutions per minute 112 Flywheel dia. 2218.5 Weight 2.19 tons Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, {Solid forged
Semi built dia. of journals
All built} as per Rule 441.69 mm as fitted 460 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 650 mm Thickness parallel to axis 26 mm
Mid. length thickness 264 mm shrunk Thickness around eye hole 205 mm

Propeller Shaft, diameter as per Rule 441.59 mm as fitted 18 1/4 Intermediate Shafts, diameter as per Rule 1238 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
screw} shaft fitted with a continuous liner {Yes

Bronze Liners, thickness in way of bushes as per Rule 72 as fitted 7/8 Thickness between bushes as per Rule .54 as fitted 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 —
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 5-0

Propeller, dia. 15.9 Pitch 11.3 No. of blades 4 Material Brass 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 Fore Thickness of cylinder liners 40/48 mm 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 Rotary Stroke 35 low for 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 low for } one 8" x 8" x 10"
How driven Main Engine } Steam Engine

Is the cooling water led to the bilges — 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 Rotary
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 —

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 — No. — 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 *yes* Are reports or certificates now forwarded *yes*
 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. *1* 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. *2* Total cubic capacity *800 Cu/FT* Internal diameter *5-10 1/4"* thickness *15/16"*
 Seamless, lap welded or riveted longitudinal joint *TR+D BS* 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 *yes* Receivers *yes* Separate Fuel Tanks *yes*
 (If not, state date of approval) _____
 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 Links
 + stanford LR. 3386 W.G.M. 15-12.38 also 602-Dou Propeller*

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

W. Carter 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 9 10 11 14 19 20 21 24 26 31 NOV. 3 4 9 11 14 16 17 18 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* ^{turning} Flywheel 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.* ^{turning} Flywheel 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 *✓* 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 *✓* 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 *✓*

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 Enguin+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 \otimes T.M.C. 2-39 (Notation of Donkey Boilers w.P. 180lb)

GLASGOW

The amount of Entry Fee £ 6 : - : When applied for,
 Special ... £ 100 : 3 : 16th FEB '4. 1939
 Donkey Boiler Fee ... £ 25 : 3 :
 Travelling Expenses (if any) £ 8 : 8 : 20/2/1939

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

Committee's Minute **GLASGOW 21 FEB 1939**

Assigned *7. June 2.39*
one Eng. 200 B. 180lb.

