

## REPORT ON OIL ENGINE MACHINERY.

No. 13838

19 JUL 1953

Date of writing Report 26.6.53 When handed in at Local Office 3.7.53 Port of TRIESTE  
 Received at London Office  
 Date, First Survey 6/2 MAY 1952 Last Survey 17/2 JUNE 1953  
 Number of Visits 92  
 Survey held at TRIESTE  
 Date, First Survey 6/2 MAY 1952 Last Survey 17/2 JUNE 1953  
 Number of Visits 92  
 1629 on the Tonnage Book  
 Single Triple Quadruple  
 Screw vessel Motor Vessel "EL NIL"  
 Tons Gross 2737 Net 1439  
 Built at Trieste By whom built Cantieri Riuniti dell'Adriatico Yard No. 1779 When built 1953  
 Engines made at DO By whom made DO Engine No. 5579 When made 1953  
 Monkey Boilers made at DO By whom made DO Boiler No. 1970 When made 1953  
 Indicated Horse Power 3000 Owners Alexandria Navigation Co., S.A.E. Port belonging to Alexandria  
 Power as per Rule 600 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Use for which vessel is intended General Cargo

**ENGINES, &c.**—Type of Engines C.R.D.A. SULZER 6 SD 60 2 or 4 stroke cycle 2 Single or double acting single  
 Minimum pressure in cylinders 55 kg/cm<sup>2</sup> Diameter of cylinders 600 mm Length of stroke 1040 mm No. of cylinders 6 No. of cranks 6  
 Indicated Pressure 6.35 Kg/cm<sup>2</sup> Ahead Firing Order in Cylinders 1,6,2,4,3,5 Span of bearings, adjacent to the crank, measured  
 inner edge to inner edge 760 mm Is there a bearing between each crank yes Revolutions per minute 150  
 Wheel dia. 2100 mm Weight 3 tons Moment of inertia of flywheel (lbs.in<sup>2</sup> or Kg.cm<sup>2</sup>) 10,000 Means of ignition Comp'n Kind of fuel used Heavy Oil  
 Solid forged dia. of journals as per Rule as appd. 400 mm Crank pin dia. 400 mm Crank webs Mid. length breadth 650 mm Thickness parallel to axis  
 Semi built dia. of journals as fitted 400 mm Crank webs Mid. length thickness 220 mm shrunk Thickness around eye hole 188 mm  
 All built as per Rule as appd. Intermediate Shafts, diameter as per Rule as appd. 270 mm Thrust Shaft, diameter at collars as fitted 400 mm  
 Wheel Shaft, diameter as fitted 400 mm as per Rule as appd. Is the tube screw shaft fitted with a continuous liner yes  
 e Shaft, diameter as fitted 307 mm reduced to 284 mm at coupling  
 Size Liners, thickness in way of bushes as per Rule as appd. 17 mm Thickness between bushes as fitted 14 mm Is the after end of the liner made watertight in the  
 bell boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner  
 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-  
 osive 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  
 of tube shaft no If so, state type Length of bearing in Stern Bush next to and supporting propeller 1275 mm  
 Propeller, dia. 3800 mm Pitch 3550 mm No. of blades 4 Material bronze whether moveable fixed Total developed surface 4.84 sq. feet  
 Moment of inertia of propeller (lbs.in<sup>2</sup> or Kg.cm<sup>2</sup>) 7200 Kind of damper, if fitted none  
 Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of  
 location forced Thickness of cylinder liners 38 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled  
 gged with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
 to the engine Cooling Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes  
 e Pumps worked from the Main Engines, No. 1 Diameter 16" Stroke 10" Can one be overhauled while the other is at work all 70T/Hr  
 ps connected to the Main Bilge Line No. and size 1 G.S. pump 1 Bilge & ballast pump 1 emergency bilge & fire pump  
 How driven Elect. Mot. Elect. Motor Elect. Motor at Main deck level  
 e 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  
 gements  
 ist Pumps, No. and size 2 at 70 T/Hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 at 115 T/Hr  
 two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary  
 pumps, No. and size:—In machinery spaces 4 at 70 mm diam. In tunnel 1 at 70 mm In pump room  
 lds, &c. 1, 2 & 3. 2 each at 70 mm. No. 4 hold 3 at 70 mm (from Emergency pump)  
 pendent Power Pump Direct Suctions to the engine room bilges, No. and size 1 at 110 mm from G.S. & B.&B. pump 1 at 110 mm  
 all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes 1 at 175 mm from M.E. Circ. pumps.  
 sible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes, As practicable,  
 ll Sea Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks both Are they fixed  
 iently high on the ship's side to be seen without lifting the platform plates Are the overboard discharges above or below the deep water line above  
 hey 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  
 pipes pass through the bunkers How are they protected  
 pipes pass through the deep tanks Bilge & Ballast piping to forward holds Have they been tested as per Rule yes  
 ll pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times yes  
 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  
 es, or from one compartment to another yes Is the shaft tunnel watertight yes Is it fitted with a watertight door yes worked from Deck  
 wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork  
 n Air Compressors, No. 2 No. of stages 2 capacity 135 M<sup>3</sup> per each driven by  
 iliary Air Compressors, No. 2 No. of stages 2 capacity 135 M<sup>3</sup> per each driven by Elect. Motor  
 ll Auxiliary Air Compressors, No. 2 No. of stages 2 capacity 135 M<sup>3</sup> per each driven by  
 at provision is made for first charging the air receivers 1 hand compressor  
 enging Air Pumps, No. 5 driven by rocking lever diameter 800 mm stroke 420 mm driven by Main engine  
 iliary Engines crank shafts, diameter as per Rule as approved No. 1: 5 cyl. No. 2 & 3: 3 cyl. No. 4: 3 cyl. No. 5: 3 cyl.  
 as fitted Pins 145 mm Journals 155 mm diam. Position 5 cyl. aft. Port outboard 3 cyl. aft. &  
 the auxiliary engines been constructed under special survey yes Is a report sent herewith yes (forward inboard)

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AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate 2520  
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, welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure ✓  
Starting Air Receivers, No. 2 Total cubic capacity 12 m<sup>3</sup> Internal diameter 1346 mm thickness 27 mm  
Seamless, welded or riveted longitudinal joint welded Material S.M.S. Range of tensile strength 41 Kg/mm<sup>2</sup> Working pressure 30 kg  
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 yes  
PLANS. Are approved plans forwarded herewith for shafting yes Receivers yes Separate fuel tanks ✓  
Donkey boilers yes General pumping arrangements yes Pumping arrangements in machinery space yes  
Oil fuel burning arrangements yes  
Have Torsional Vibration characteristics been approved yes Date of approval 7.11.52

#### SPARE GEAR.

Has the spare gear required by the Rules been supplied yes  
State the principal additional spare gear supplied One cast iron propeller and various miscellaneous items

The foregoing is a correct description,  
Cantieri Riuniti Dell'Adriatico  
FABBRICA MACCHINE S. ANDREA

Manufacturer.

Dates of Survey while building  
During progress of work in shops - - -  
During erection on board vessel - - -  
Total No. of visits 92  
See attached sheet  
Dates of examination of principal parts—Cylinders Dec. 1952 Covers Oct/Nov '52 Pistons 19.7.50 Rods 31.1.52 Connecting rods May '52  
Crank shaft 26.9.52 Flywheel shaft ✓ Thrust shaft 26.9.52 Intermediate shafts Oct/Nov '52 Tube shaft ✓  
Screw shaft 26.9.52 Propeller 17.12.52 Stern tube 14.3.53 Engine seatings 21.5.53 Engine holding down bolts 21.5.53  
Completion of fitting sea connections Jan. 1953 Completion of pumping arrangements 14.6.53 Engines tried under working conditions 14.6.53  
Crank shaft, material E.F.S. Identification mark LLOYD'S with N° Flywheel shaft, material ✓ Identification mark ✓  
Thrust shaft, material E.F.S. Identification mark LLOYD'S Intermediate shafts, material E.F.S. Identification marks LLOYD'S  
Tube shaft, material ✓ Identification mark ✓ Screw shaft, material E.F.S. Identification mark LLOYD'S  
Identification marks on air receivers 799 LLOYD'S TEST 48,5 Kg/cm<sup>2</sup> W.P. 30 Kg/cm<sup>2</sup> - SV - 3.4.53  
800 LLOYD'S TEST 48,5 Kg/cm<sup>2</sup> W.P. 30 Kg/cm<sup>2</sup> - JJW - 9.4.53  
Welded receivers, state Makers' Name Cantieri Riuniti dell'Adriatico - Fabbrica Macchine San. Andrea Trieste  
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  
Description of fire extinguishing apparatus fitted CO<sub>2</sub> to machinery spaces. Large & portable foam containers. Steaming on boiler flat. water hose connections.  
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 ✓  
Is this machinery duplicate of a previous case yes If so, state name of vessel M/V "STAR OF ALEXANDRIA" (CRDA)

General Remarks (State quality of workmanship, opinions as to class, &c.)  
The machinery of this vessel has been constructed under special survey, in accordance with the Secretary's letters and approved plans. All important forgings and castings were made, inspected and tested in accordance with the Rules. The workmanship and materials are good.  
The machinery was installed on board the vessel in an efficient manner and found satisfactory when tested at sea under full working conditions.  
In my opinion the machinery of this vessel is eligible to be classed with the records of  
+ LMC - 6,53 Oil Engine. Screwshaft. CL. DB 100 lbs.

The amount of Entry Fee ... £  
Special ... £ 420. 10. 0 When applied for 4. 7 19 53  
Donkey Boiler Fee... £ 35. 0. 0 When received 19 53  
Travelling Expenses (if any) £ 35. 0. 0

Committee's Minute

Assigned

FRIDAY - 7 AUG 1953

+ LMC 6.53 Oil Eng.  
CL DB 100lb

Engineer Surveyor to Lloyd's Register of Shipping



Lloyd's Register  
Foundation