

## REPORT ON OIL ENGINE MACHINERY.

No 13245

Received at London Office

Date of writing Report 16.3.1949 When handed in at Local Office 24.3.1949 Port of TRIESTE

No. in Survey held at Trieste Date, First Survey 24TH JANUARY 47 Last Survey 14TH MARCH 1949

Reg. Book. 95603 on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> ~~Quadruple~~ Screw vessel M/V. "Port Said" Tons Gross Net

Built at Trieste By whom built Cant. Riun. dell' Adriatico Yard No. 1747 When built 1949  
 Engines made at Trieste By whom made do Engine No. 5494 When made 1949  
 Donkey Boilers made at Trieste By whom made do Boiler No. 1921 When made 1949  
 Brake Horse Power 4200 Owners Mistr Navigation Co. Port belonging to Alexandria  
 Nom. Horse Power as per Rule 842 <sup>HN</sup> Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes  
 Trade for which vessel is intended General cargo - Refrigerated cargo - Passengers

**II. ENGINES, &c.** Type of Engines DIESEL - SULZER 6 SD 72 2 or 4 stroke cycle 2 Single or double acting S.A.  
 Maximum pressure in cylinders 55 kgs/cm<sup>2</sup> 28 3/8" 49 3/16"  
 Mean Indicated Pressure 5.95 Diameter of cylinders 720 mm Length of stroke 1250 mm No. of cylinders 6 No. of cranks 6  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 930 mm Is there a bearing between each crank yes  
 Revolutions per minute 130 Flywheel dia. 2423 mm Weight 2194 kgs Means of ignition compr. Kind of fuel used heavy oil  
 Crank Shaft, <sup>Solid forged</sup> ~~Semi built~~ ~~all built~~ dia. of journals as per Rule as fitted 490 mm Crank pin dia. 490 mm Crank Webs Mid. length breadth 860 mm shrunk Thickness parallel to axis Thickness around eye-hole 244 mm  
 Flywheel Shaft, diameter as per Rule as fitted 490 mm Intermediate Shafts, diameter as per Rule as fitted 335 mm Thrust Shaft, diameter at collars as per Rule as fitted 490 mm  
 Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 370 mm Is the <sup>tube</sup> ~~screw~~ shaft fitted with a continuous liner yes  
 + 352 h ft. of gland as per Rule as fitted 15 mm 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  
 If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1600 mm  
 Propeller, dia. 4940 mm Pitch 3750 mm No. of blades 3 Material bronze whether Moveable no Total Developed Surface 7.69 sq. feet  
 Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced  
 Thickness of cylinder liners 43 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers ~~water cooled~~ lagged with non-conducting material yes  
 If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine  
 Cooling Water Pumps, No. 2 SW - 2 FW 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. 1 Diameter 186 mm Stroke 160 mm Can one be overhauled while the other is at work  
 Pumps connected to the Main Bilge Line No. and Size 3 of 90 Tons/h. - 1 of 60 Tons/h. How driven electric motors main engine  
 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  
 Ballast Pumps, No. and size 1 of 90 Tons/h. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 of 43 - 1 of 35 - 2 of 5 T/h.  
 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 4 at 80 mm - 1 at 80 mm in tunnel In Pump Room  
 Holds, &c. No 1 - 2 at 80 mm - No 2 - 2 at 100 mm - No 3 - 2 at 80 mm - No 4 - 2 at 80 mm  
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 at 125 mm S. - 2 at 125 mm P.  
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces  
 and 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 yes  
 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 below  
 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  
 That pipes pass through the bunkers How are they protected  
 That pipes pass through the deep tanks 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 yes Is it fitted with a watertight door yes worked from main deck  
 On 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 Diameter 160 m<sup>3</sup> stroke cap. each Driven by electric motors  
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameter 23 litres stroke capacity Driven by hand  
 Is provision made for first Charging the Air Receivers hand compressor  
 SAVING Air Pumps, No. 1 x 2 (tandem) Diameter 1450 mm Stroke 750 mm Driven by main engine  
 Auxiliary Engines crank shafts, diameter as per Rule as fitted 170 mm - 75 mm No. 3 + 1 (Emergency) Position Engine room portside - boat deck  
 Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith yes

Sent  
26/4/49



28 MAR 1949

AIR RECEIVERS: - Have they been made under survey

State No. of Report or Certificate N° 1157

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

Actual

Starting Air Receivers, No. 2 + 2 bottles

Total cubic capacity 24000 litres

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint riveted

Material steel

Range of tensile strength

Working pressure by Rules

Actual

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafing

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

1 screw shaft - 1 cylinder liner - miscellaneous small

Torsional vibration characteristics approved with Secretary's letter (2.5.47)

Notice plate fitted reading:

Main engine not to be run continuously below 40 r.p.m.

The foregoing is a correct description.

Cantieri Riuniti Dell'Adriatico

FABBRICA MACCHINE S. ANGELO

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1947-JAN: 24, MAR: 11, AUG: 22, 25, 28, 30, SEP: 3, 5, 8, OCT: 1, 11, NOV: 15, 1948 JAN: 16, 20, 26, FEB: 2, MAR: 5, 18, 23, APR: 7, 29, 30, MAY: 11, 26, JUN: 8, 9, 15, 17, 30, JUL: 3, 7, 15, 19, 21, 28, AUG: 3, 5, 7, 13, 31, SEP: 6 - During erection on board vessel - 1948: SEP: 15, 17, 22, 23, OCT: 1, 4, 6, 12, 13, 15, 22, 23, 26, 27, 30, NOV: 25, DEC: 1, 6, 7, 9, 13, 14, 16, 17, 23, 1949 JAN: 4, 5, 17, 18, 21, FEB: 3, 4, 7, 23, MAR: 8, 9, 10, 11, 12, 14. - Total No. of visits 84.

Dates of Examination of principal parts - Cylinders 23.12.48 Covers 23.12.48 Pistons 23.12.48 Rods 23.12.48 Connecting rods 23.12.48

Crank shaft 23.12.48 Flywheel shaft 23.12.48 Thrust shaft 23.12.48 Intermediate shafts 16.1.49 Tube shaft 23.12.48

Screw shaft 6.9.48 Propeller 17.9.48 Stern tube 6.9.48 Engine seatings 6.9.48 Engines holding down bolts 7.2.49

Completion of fitting sea connections 6.9.48 Completion of pumping arrangements 10.3.49 Engines tried under working conditions 12.3.49

Crank shaft, Material S.M.S. Identification Mark Lloyd's R 48 A.G. Flywheel shaft, Material S.M.S. Identification Mark Lloyd's R 48 A.G.

Thrust shaft, Material S.M.S. Identification Mark Lloyd's R 48 A.G. Intermediate shafts, Material S.M.S. Identification Marks Lloyd's F 126

Tube shaft, Material S.M.S. Identification Mark Lloyd's F 126 and bottles 1-83554 & 1-83555

Identification Marks on Air Receivers: Lloyd's Test TP 50 Kgs/cm² WP 30 L.S. 25-8-47 Lloyd's Test TP 48.5 Kgs/cm² WP 30 S.C. 9.12.48 Lloyd's Test TP 60 Kgs/cm² WP 30 G.M. 21.8.47

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

Description of fire extinguishing apparatus fitted CO2 led to engine room - Steam with remote control under boiler.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo yes (veg. oil) 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 "Star of Suez" Yard N° 1742

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 and inspected in accordance with the Rules, excepting the main engine rods which were made and tested in 1941 by Society's pre-war Surveyors at Dusseldorf and the results shown in their certificates have now confirmed by Briwell tests and the parts found satisfactory.

The workmanship and materials are good. - The machinery was installed on board the in an efficient manner and found satisfactory when tested at sea in full working condition.

In our opinion, the machinery of this vessel is eligible to be classed with record L.M.C. 3.49 Oil Engine - Screw shaft C.L. - 1 D.B. 100

The amount of Entry Fee Lire 584.160. = When applied for, Special ... £ : : When received, Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : :

Committee's Minute

Assigned + LMC 3.49 Oil Eng. C.L. DB 100lb.

John M'Gee Engineer Surveyor to Lloyd's Register of Shipping



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