

REPORT ON OIL ENGINE MACHINERY.

Received at London Office OCT 26 1938

Date of writing Report 3.9.38 When handed in at Local Office 21st Oct. 1938 Port of Genoa
 No. in Survey held at Genoa Date, First Survey 4th MARCH 1938 Last Survey 20th OCTOBER 1938
 Reg. Book. m/s Dosiunia Number of Visits 82

on the Single Screw vessel m/s Dosiunia Tons Gross 8053.30
Triple
Quadruple
 Built at Pi-lasgow By whom built Lithgow L^d Yard No. 910 When built 1938
 Engines made at Genoa By whom made Johannes & Kuehn L^d Engine No. 1117 When made 1938
 Donkey Boilers made at Lith By whom made ditto Boiler No. 1117 When made 1938
 Brake Horse Power 2800 Owners Anglo Saxon Petroleum L^d 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 Direct Solid Injection (under Piston Supersuction) or 4 stroke cycle H Single or double acting Single
 Maximum pressure in cylinders 600 Diameter of cylinders 25⁹/₁₆ 6.50 m Length of stroke 55⁸/₁₆ 1.400 m No. of cylinders 8 No. of cranks 8
 Mean Indicated Pressure 7.65 kg/cm² 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. 2219 mm Weight 2.9 tons Means of ignition Compression Kind of fuel used Diesel
 Crank Shaft, Solid forged as per Rule 436 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth Thickness parallel to axis 264 mm
Semi built dia. of journals as fitted 460 mm Mid. length thickness shrunk Thickness around eye-hole 205 mm
All built
 Flywheel Shaft, diameter as per Rule 436 mm Intermediate Shafts, diameter as per Rule 12.18" Thrust Shaft, diameter at collars as per Rule 12.8"
 as fitted 18 1/4" as fitted 2.1" as fitted 18 1/4"
 Tube Shaft, diameter as per Rule 13.5" Is the tube shaft fitted with a continuous liner Yes
 as fitted 18" as fitted 18"
 Bronze Liners, thickness in way of bushes as per Rule 7/8" Thickness between bushes as per Rule 1 1/16" Is the after end of the liner made watertight in the propeller boss Yes
 as fitted 7/8" as fitted 1 1/16"
 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 None Length of Bearing in Stern Bush next to and supporting propeller 5' 0"
 Propeller, dia. 15' 0" Pitch 12' 0" No. of blades 4 Material Brass whether Moveable No Total Developed Surface 72 sq. feet
 Method of reversing Engines air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced
 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 Diameter Rotary Stroke 35 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 35 tons } on 8' x 8' x 10'
How driven Main Engine Steam 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 None
 Ballast Pumps, No. and size None Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 (1-40 tons) 1-8' 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, 3 1/2" In Pump Room 2-6"
 In Holds, &c. 2, 2 1/2" Taints 6' x 8" Cuffordam 2-3"
 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 None
 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 fitted Is it fitted with a watertight door Yes worked from None
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork None

Main Air Compressors, No. 1 No. of stages 1 Diameters 15" + 11" Stroke 4" Driven by Steam
 Auxiliary Air Compressors, No. 2 No. of stages 204 Diameters 15" + 11" Stroke 4" Driven by Steam
 Small Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 15" + 11" Stroke 4" Driven by Steam
 What provision is made for first Charging the Air Receivers Steam Driven Compressor
 Scavenging Air Pumps, No. 1 Diameter 15" Stroke 4" Driven by Steam
 Auxiliary Engines crank shafts, diameter as per Rule 436 mm Position Engine Room
 as fitted 436 mm Is a report sent herewith Yes
 Have the Auxiliary Engines been constructed under special survey Yes

AIR RECEIVERS:—Have they been made under survey *yes* ✓ State No. of Report or Certificate
 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, lap welded or riveted longitudinal joint _____ Material _____ Range of tensile strength _____ Working pressure ^{by Rules} _____ _{Actual} _____
Starting Air Receivers, No. *2* ✓ Total cubic capacity *8000/F* Internal diameter *5.10 1/4"* ✓ thickness *15/16"* ✓
 Seamless, lap welded or riveted longitudinal joint *TRIPLES* Material *S* ✓ Range of tensile strength *29, 33* Working pressure ^{by Rules} *354* _{Actual} *350 lb*

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 *✓*
 (If not, state date of approval) _____
 Donkey Boilers *yes* ✓ General Pumping Arrangements *yes* ✓ Pumping Arrangements in Machinery Space *✓*
 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 *Propeller shaft-coupling (continuous line) & coupling
 LR 4889, W.G.M 19.8.38 Carl Iron Propeller*

The foregoing is a correct description,
FOR JOHN G. KINCAID & CO. LIMITED.
McCart Director. Manufacturer.

Dates of Survey while building
 During progress of work in shops: (1938) MAR. 4-8-16-18-21-31. APRIL 5-11-15-19-20-21-25-24-28. MAY 4-5-9-11-12-16-20-23-26. JUNE 2-4-9-11-16-14-20-21-23-24-24-28. JULY 12-13-14-15-16-17-18-19-20
 During erection on board vessel: 15-18-19-20-21-22-25-27-28. AUG. 1-3-8-12-15-16-18-19-22-23-24-25-29. SEPT. 2-5-6-4-8-9-11-16-21-23-26-24-29. OCT. 7-8-12-13-17-18-19-20
 Total No. of visits *82.*

Dates of Examination of principal parts—Cylinders *14-7-38* Covers *28-6-38* Pistons *24-4-38* Rods *18-8-38* Connecting rods *18-8-38*
 Crank shaft *23-8-38* Turbine wheel shaft *23-8-38* Thrust shaft *25-7-38* Intermediate shafts *25-7-38* Tube shaft *✓*
 Screw shaft *13-4-38* Propeller *13-4-38* Stern tube *21-6-38* Engine seatings *21-6-38* Engines holding down bolts *27-9-38*
 Completion of fitting sea connections *15-8-38* Completion of pumping arrangements *13-10-38* Engines tried under working conditions *20-10-38*
 Crank shaft, Material *S* Identification Mark *LR 4889 WGM* Turbine wheel shaft, Material *S* Identification Mark *LR 4889 WGM*
 Thrust shaft, Material *S* Identification Mark *LR 4889 WGM* Intermediate shafts, Material *S* Identification Marks *LR 4889 WGM*
 Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S* Identification Mark *LR 4889 WGM*

Identification Marks on Air Receivers
 NO 2152
 LLOYD'S TEST 5754
 WP 350 lb
 W.G.M. 26.5.38

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 *no* ✓

Is this machinery duplicate of a previous case *yes* ✓ If so, state name of vessel *M/S DORCASIA Exh Regd No 20610*
General Remarks (State quality of workmanship, opinions as to class, &c.) *These Engines & Boiler have been built under special survey in accordance with the approved plans & the workmanship & material are of good quality. They have now 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 10/38 (Notation of Donkey Boiler WP 180 lb)

The amount of Entry Fee £ 6 : - : When applied for,
 Special ... £ 100 : 3 : 21st OCTOBER 1938.
 Donkey Boiler Fee ... £ 16 : 12 : When received,
Carl Iron £ 8 : 8 : 25/10 1938
 Committee's Minute **GLASGOW 25 OCT 1938**
 Assigned + L.M.C 10.38 *DB 180 lb.*

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

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