

# REPORT ON OIL ENGINE MACHINERY.

Sl. No. 33210  
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of writing Report 26/7/1941 When handed in at Local Office 28/7/1941 Port of W. Hartlepool Date, First Survey 10<sup>th</sup> May, 1939 Last Survey 24<sup>th</sup> July 1941. Number of Visits 116

in Survey held at Hartlepool  
Book. Single Screw vessel M.V. ST. EGYPT Tons { Gross 5634 Net 3302  
Built at Sunderland By whom built J.L. Thompson & Sons Ltd. Yard No. 600 When built  
Engines made at Hartlepool By whom made Richardsons Westgate Co Engine No. 2695 When made 1941  
Boilers made at By whom made Boiler No. When made  
Horse Power 3200 Owners Sand American Line Port belonging to Hampshire  
Horse Power as per Rule 688 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
Use for which vessel is intended

ENGINES, &c.—Type of Engines Doxford Opposed Piston Airless Injection or 4 stroke cycle 2 Single or double acting Single  
Minimum pressure in cylinders 540 LB/SQ IN Diameter of cylinders 600 mm Length of stroke 2320 mm No. of cylinders 4 No. of cranks 12  
Indicated Pressure 86.5 LB/SQ IN (Service) Is there a bearing between each crank Between each cylinder  
No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 1890 mm Means of ignition Compression Kind of fuel used Heavy oil  
Revolutions per minute 106 Flywheel dia. 2308 mm Weight 1.37 tons Mid. length breadth 650 mm Thickness parallel to axis 255 mm  
Crankshaft, dia. of journals 420 mm Crank pin dia. 450 mm Crank Webs Mid. length thickness 255 mm Thickness around eyehole 200 mm  
Crankshaft, as per Rule 420 mm as fitted 450 mm Thrust Shaft, diameter at collars 420 mm as per Rule 450 mm as fitted 450 mm  
Intermediate Shafts, diameter as per Rule 13.19" as fitted 13.12" Is the shaft fitted with a continuous liner Yes  
Screw Shaft, diameter as per Rule 14.52" as fitted 15" Is the shaft fitted with a continuous liner Yes

Size Liners, thickness in way of bushes as per Rule 3/16" as fitted 13/16" Thickness between bushes as per Rule 9/16" as fitted 5/8" Is the after end of the liner made watertight in the stern 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  
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  
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  
Length of Bearing in Stern Bush next to and supporting propeller 5'-0"  
Propeller, dia. 16'-0" Pitch Varying No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 96 sq. feet  
Method of reversing Engines Sliding Camshaft Is a governor or other arrangement fitted to prevent racing of the engine when disconnected Yes Means of lubrication Oil  
Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with 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 Ballast pump - stand by

Bilge Pumps, No. 1 Ballast pump - stand by 250 lbs/hr. 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 Electric 20/36 B.H.P. Diameter 6" Stroke 6" Can one be overhauled while the other is at work Yes  
Pumps connected to the Main Bilge Line { No. and Size 1, Ballast pump, 1-6"x6" Lamont's Bilge pump 10 B.H.P. How driven Electric  
If the cooling water led to the bilges No, overboard discharge If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements.

Oil Pumps, No. and size 1-12"x12" Lamont 35 B.H.P. Electric Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2-5" Hamworthy Rotax Pumps Electric 33 lbs/hr.  
Two independent means arranged for circulating water through the Oil Cooler Yes, Ballast pump Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 4-3", 1-2 1/2" Coffeyden, 1-4 1/2" Tunnel In Pump Room Yes  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-5 1/2" port salt water pump, 1-5" stand. Ballast pump  
All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
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 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  
How are they protected 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 Yes Is it fitted with a watertight door Yes worked from upper deck  
If the vessel is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Auxiliary Air Compressors, No. 2 125 cu. ft. of air per minute No. of stages 2 Diameters 9 1/2" x 7 1/2" x 3 1/2" Stroke 8" Driven by Electric Motor 63 B.H.P.  
Auxiliary Air Compressors, No. 1 14 cu. ft. of air per minute No. of stages 2 Diameters 8" Stroke 8" Driven by H.O. Engine 8 1/2 B.H.P. 1100 R.P.M.  
Is provision made for first Charging the Air Receivers By Small air compressor - hand started H.O. Engine  
Refrigerating Air Pumps, No. 1 Diameter 19 00 mm Stroke 600 mm Driven by Levers from Main Eng. crosshead  
Auxiliary Engines crank shafts, diameter as per Rule as fitted Position Is a report sent herewith

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

**AIR RECEIVERS:**—Have they been made under survey *Yes* State No. of Report or Certificate *880*  
 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 *100* Internal diameter *10"* thickness *1/8"*  
 Seamless, lap welded or riveted longitudinal joint *Seamless* Material *Steel* Range of tensile strength *30,000* Working pressure by Rules *100* Actual *100*  
**Starting Air Receivers, No.** *2* Total cubic capacity *220 cu ft.* Internal diameter *3'-6"* thickness *1 1/8"*  
 Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *28,330 lbs/sq in* Working pressure by Rules *604* Actual *600*

**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 *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 *None*

The foregoing is a correct description,  
 For **RICHARDSON'S WESTGARTH & Co. LIMEWORKERS** Manufacturer.

Dates of Survey while building  
 During progress of work in shops-- 1939, May 10-26, June 2-13-16, DIRECTOR 19-21-22-27-29, July 6-7-11-12-13-14-17-19-21-31, Aug 2-14-16-18-21-28, Sept 6-12-19  
 During erection on board vessel-- 6-8-11-19-21-28, April 3-4-15, May 5-13-20-23, June 6, July 3-8-15-16-18, Aug 8-20, Oct 25, Nov 4-15, 1941, Jan 9-10-11  
 Total No. of visits *116*

Dates of Examination of principal parts—Cylinders *9-1-40* Covers *✓* Pistons *9/1/41* Rods *18-1-40* Connecting rods *26-2-41*  
 Crank shaft *19/5/41* Flywheel shaft *✓* Thrust shaft *19/5/41* Intermediate shafts *6-6-40* Tube shaft *✓*  
 Screw shaft *20-5-40* Propeller *13-5-40* Stern tube *23-5-40* Engine seatings *✓* Engines holding down bolts *✓*  
 Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *16/7/41*  
 Crank shaft, Material *Steel* Identification Mark *2695 J.S.C* Flywheel shaft, Material *Steel* Identification Mark *2695 J.S.C*  
 Thrust shaft, Material *Steel* Identification Mark *2695 J.S.C* Intermediate shafts, Material *Steel* Identification Marks *543, 456, 789*  
 Tube shaft, Material *Steel* Identification Mark *8974 H.A.C.*  
 Identification Marks on Air Receivers *LLOYD'S TEST 800 LB. W.P. 600 LB. C.B. 15/11/40*

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 *Yes* If so, state name of vessel *Yes*

**General Remarks** (State quality of workmanship, opinions as to class, etc.) *This vessel's machinery has been constructed under Special Survey & in accordance with the approved plans. The engines have been under working conditions in shop. The two riveted air receivers have been constructed under Special Survey & in accordance with the approved plan for a working pressure of 600 lbs/sq in & tested hydraulically on completion to 800 lbs/sq in & found sound & tight. The fusion welded bedplate & entablature have been examined during construction & a conclusion of test bed trial. The materials & workmanship have been found good. All parts subjected to pressure have been tested hydraulically. The machinery has been forwarded to Sunderland to be fitted on board J.L. Thompson's Yd. No 601. In our opinion, this vessel will be eligible to have record of L.M.C. with on completion.*

The amount of Entry Fee .. £ *6 : 0* : When applied for, ..  
 Special *3* L.M.C. .. £ *72 : 18* : ..  
 Bedplate & Entablature .. £ *12 : 12* : ..  
 Air Receivers .. £ *4 : 4* : ..  
 Travelling Expenses (if any) .. £ .. : ..

Committee's Minute *See Std. J.C. 33210*  
 Assigned *See Std. J.C. 33210*  
 Engineer Surveyor to Lloyd's Register of Shipping. *Woodward & Clive Bell*

Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)

