

Rpt. 4.

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office **10 JAN 1948**

Date of writing Report 5th Jan. 1948. When handed in at Local Office 9th Jan. 1948. Port of MIDDLESBROUGH.  
 No. in Survey held at SUNDERLAND 24 Sep 1947. Date, First Survey 17th Dec. 1946. Last Survey 8th March 1948.  
 Reg. Book 17th Dec. 1946. (Number of Visits 16) Last Survey 22nd Dec. 1947.  
 on the S.S. "POLYPHIA" Tons {Gross 5042, Net 2432.  
 Built at Sunderland. By whom built J.L. Thompson. Yard No. 855. When built 1948.  
 Engines made at South Bank. By whom made Smith's Dock Co. Ltd. Engine No. 626. When made  
 Boilers made at Greenock. By whom made John G. Kincaid Boiler No. 539. When made  
 Registered Horse Power 730 M.N. Owners Anglo Saxon Petroleum Co. Port belonging to  
 Nom. Horse Power as per Rule 730 M.N. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which vessel is intended Tanker

**ENGINES, &c.**—Description of Engines Steam Reciprocating Twin Screw Revs. per minute 90  
 Dia. of Cylinders 31 1/2" 36" 61" Length of Stroke 39" No. of Cylinders 3 each engine No. of Cranks 3 each engine  
 Crank shaft, dia. of journals 11.24 as per Rule 11.24 Crank pin dia. 1'0 1/2" Crank webs 1'0 1/2" Mid. length breadth 8" Thickness parallel to axis 8"  
 as fitted 1'0 1/2" Crank pin dia. 1'0 1/2" Crank webs 1'0 1/2" Mid. length thickness 8" LP 5 1/2" Thickness around eye-hole 5.5/8"  
 Intermediate Shafts, diameter 11.59 as per Rule 11.59 Thrust shaft, diameter at collars 11.94 as per Rule 11.94  
 as fitted 12" as fitted 1'0 1/2"

Tube Shafts, diameter 12.33 as per Rule 12.33 Screw Shaft, diameter 12 1/2" as per Rule 12 1/2" Is the tube shaft fitted with a continuous liner Yes  
 as fitted 12 1/2" as fitted 12 1/2"  
 Bronze Liners, thickness in way of bushes 11/16" as per Rule 11/16" Thickness between bushes 17/32" as per Rule 17/32" Is the after end of the liner made watertight in the propeller boss Yes  
 as fitted 23/32" as fitted 17/32"

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 Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube at Yes If so, state type Oil gland Length of Bearing in Stern Bush next to and supporting propeller 4' 11 1/2"

Propeller, dia. 14'0" Pitch 12' 38" No. of Blades 4 Material Cast Iron whether Moveable No Total Developed Surface 72 sq. feet  
 Feed Pumps worked from the Main Engines, No. None Diameter None Stroke None Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. One each engine Diameter 7 1/2" Stroke 6 1/2" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size Two 13 1/2" x 10" x 24" stroke Pumps connected to the { No. and size One 10" x 12" x 12" Two 7 1/2" x 6 1/2" stroke  
 How driven Independent steam Main Bilge Line { How driven One Independent steam, Two main engines  
 Ballast Pumps, No. and size One 10" x 12" x 12" Lubricating Oil Pumps, including Spare Pump, No. and size None fitted

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room 2-3" dia (1P+1S) after well 1-3" dia  
 In-Pump Room None In Holds, &c. None

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-11" dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-4"  
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Are the Bilge Suctions in the Machinery Space 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 No (locks) Are they fitted with Valves or Cocks both  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold 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

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 Yes Is it fitted with a watertight door Yes worked from None

**MAIN BOILERS, &c.**—(Letter for record 5) Total Heating Surface of Boilers 10620  
 Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters None  
 No. and Description of Boilers 2- W.T.B. Working Pressure 220 lb/12"

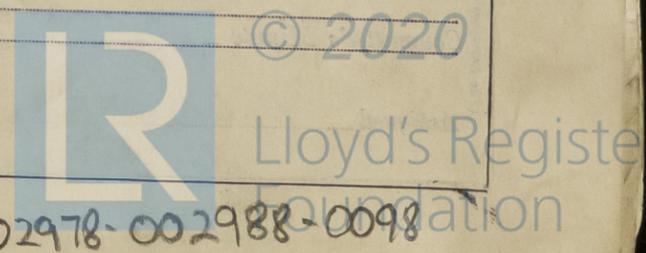
IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?  
 Can the donkey boiler be used for domestic purposes only

**PLANS.** Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes  
 Superheaters Yes General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

**SPARE GEAR.**  
 Has the spare gear required by the Rules been supplied Yes Is the Spare Gear to Rule kept? Yes  
 State the principal additional spare gear supplied  
MP + LP Piston rings (L+C)  
1 main Piston rod  
1 valve spindle  
1 Eccentric sheave  
1 Eccentric strap  
1 Guide shoe  
1 new shaft

The foregoing is a correct description. FOR SMITH'S DOCK CO. LTD.

Manufacturer. ENGINE WORKS MANAGER



002978-002988-0098

If not, state whether, and when, one will be sent

*EW*  
4/2/48

*EW*  
5/4/48

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Dates of Survey while building

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits

Dates of Examination of principal parts - Cylinders 25.2.47 to 22.5.47. Slides 17.3.47. Covers 25.2.47 to 7.3.47

Pistons 4.3.47. Piston Rods 20.3.47. Connecting rods 20.3.47

Crank shaft 27.3.47. Thrust shaft 18.12.47. Intermediate shafts 12.12.47

Tube shaft - Screw shaft 30.9.47. Propeller 23.10.47

Stern tube 27.10.47. Engine and boiler seatings - Engines holding down bolts 12.12.47

Completion of fitting sea connections

Completion of pumping arrangements 5-3-48 Boilers fixed 4.12.47. Engines tried under steam 5-3-48

Main boiler safety valves adjusted 24-2-48 Thickness of adjusting washers Part A PV 7/16 SV 1 1/2 Part B PV 7/16 SV 1 1/2

Crank shaft material Steel Identification Mark Thrust shaft material Steel Identification Mark

Intermediate shafts, material Steel Identification Marks 1199/9 JCB Tube shaft, material - Identification Mark

Screw shaft, material Steel Identification Mark 1199/9 JCB Steam Pipes, material Steel Test pressure 150 lbs per sq. in. Date of Test 20.11.47 to 19.12.47

Is an installation fitted for burning oil fuel Yes

Is the flash point of the oil to be used over 150° F. yes

Have the requirements of the Rules for the use of oil as fuel 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. Yes. If so, state name of vessel "Gene" "Gari" etc.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The engines of the vessel have been built under special survey and the materials and workmanship are good.

These engines have been securely fitted aboard, and the vessel is now returning to Messrs. J.L. Thompson, Sunderland, for completion.

On completion the machinery will be eligible for record of LMC with date and TS. (CL) with date.

Fitted forced draught and fitting for burning oil fuel with date. Flash point above 150° F.

Spare gear checked.

Pumping arrangements tested and found in order

Steam fire extinguishing line tested and found in order

Machinery tried under working conditions and found satisfactory

The survey now being completed, the machinery is in our opinion eligible as recommended by the Middlebury Surveyors for Records of LMC and TS (CL) with date

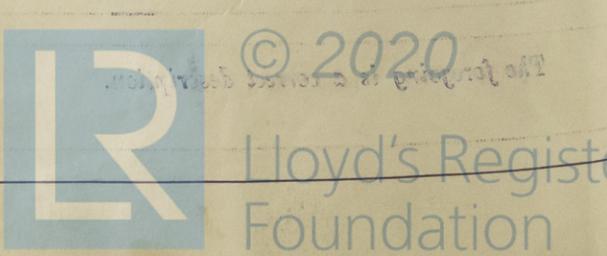
J Grieve  
Sunderland

The amount of Entry Fee	£	:	:	When applied for,
Special	£	88	16	9.1.19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

L. Norman Stewart  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned + LMC 3.48.  
FITTED FOR OIL FUEL 3.48 FLASH POINT ABOVE 150°F, F.D. C.L. 2WTA 2206.



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