

## REPORT ON OIL ENGINE MACHINERY.

No 54859.

11 MAY 1948

Received at London Office 12 MAY 1948

Date of writing Report 19 When handed in at Local Office 11 MAY 1948 Port of HULL.

No. in Survey held at Hessle Date, First Survey 29. 4. 47. Last Survey 13. 4. 1948

Reg. Book. 16198 on the ~~Single~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "CEMENC O". Number of Visits 9

Tons Gross 116 Net ✓

Built at Hessle By whom built Henry Scarr Ltd. Yard No. S.561 When built 1948

Engines made at Glasgow By whom made British Polar Engines Engine No. E.659 When made 1947

Donkey Boilers made at - By whom made - Boiler No. - When made -

Brake Horse Power 720 ✓ Owners The Associated Portland Cement Manufacturers Ltd. Port belonging to London

Nom. Horse Power as per Rule 156 184 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended For river & harbour towing services.

OIL ENGINES, &c.—Type of Engines heavy oil ✓ 2 or 4 stroke cycle 2 ✓ Single or double acting S.A. ✓

Maximum pressure in cylinders 782 lb/sq.in. Diameter of cylinders 340 m/m Length of stroke 570 m/m No. of cylinders 5 No. of cranks 5

Mean Indicated Pressure (See Glasgow Report No. 72728)

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute 220 ✓ Flywheel dia. Weight Means of ignition compression ✓ and of fuel used heavy oil ✓

Crank Shaft, { Solid forged as per Rule  
Semi built dia. of journals as fitted  
All built as fitted

Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eye hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 9 3/8" ✓ Thrust Shaft, diameter at collars as per Rule as fitted incorporated in M.E.

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 9 1/4" ✓ Is the screw shaft fitted with a continuous liner No

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the propeller boss

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

haft Yes If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 32" 3'2"

Propeller, dia. 90" Pitch - No. of blades 4 Material C.I. whether Moveable solid Total Developed Surface - 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

pump pressure. Thickness of cylinder liners - Are the cylinders fitted with safety valves 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

Cooling Water Pumps, No. 1 on M.E. 1 Aux. 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 100 m/m Stroke 140 m/m Can one be overhauled while the other is at work

pumps connected to the Main Bilge Line { No. and Size 1-100 m/m x 140 m/m, 1 cent. 2 1/2" bore.  
How driven M.E. Aux. diesel.

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 cent. 2 1/2" bore Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2-M.E. gear pumps

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 2 - 2" In Pump Room -

Holds, &c. 1 - 2" in aft cabins. 1 - 2" in 'ford cabins.

Dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 at 2" from G.S. pump. ✓

Are all the Bilge Suction pipes in ~~hull and forepeak~~ 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 ✓

Are all Sea Connections fitted direct on the skin of the ship to small E.W. steel boxes. Are they fitted with Valves or Cocks valves. ✓

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

At pipes pass through the bunkers - How are they protected -

At 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 - Is it fitted with a watertight door - worked from -

Is the vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. 1 No. of stages Diameters Stroke Driven by M.E. ✓

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters Reavell 99764 Stroke Driven by Aux. eng. ✓

Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

Is that provision is made for first Charging the Air Receivers the aux. engine is hand started. ✓

Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -

Auxiliary Engines crank shafts, diameter as per Rule as fitted see aux. engine reports. No. - Two 18 BHP port side of E.R. 9 BHP S.S. ✓

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Lon. Rpt. 114706 & Mch. 13060



**AIR RECEIVERS:** — Have they been made under survey **Yes** State No. of Report or Certificate *See Glasgow Rpt. No. 7272*  
Is each receiver, which can be isolated, fitted with a safety valve as per Rule **Relief valve on each receiver.**  
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. 3** Total cubic capacity - Internal diameter - thickness -  
Seamless, lap welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure *by Rules - Actual -*

**IS A DONKEY BOILER FITTED?** **No** 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 Shafting *(If not, state date of approval)* Receivers - Separate Fuel Tanks **29.10.46**  
Donkey Boilers - General Pumping Arrangements **11.12.46** & Pumping Arrangements in Machinery Space -  
Oil Fuel Burning Arrangements **E.R. pumping arrangements. 7.2.47. see letter 7.2.47. & 11.12.46.**  
**SPARE GEAR.**

Has the spare gear required by the Rules been supplied **To Owners requirements. (Harbour & river service tug).**  
State the principal additional spare gear supplied **1 spare screw shaft and propeller.**

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }  
{ During erection on board vessel - - }  
Total No. of visits **9**  
**1947. Apr. 29. May 23. June 11. Oct 29. 1948. Jan. 6. Feb. 18. Apr. 6. 9. 13**  
Dates of Examination of principal parts—Cylinders - Covers - Pistons - Rods - Connecting rods -  
Crank shaft - Flywheel shaft - Thrust shaft - Intermediate shafts **6.1.48.** Tube shaft -  
Screw shaft **6.1.48.** Propeller **6.1.48.** Stern tube **6.1.48.** Engine seatings **29.10.47.** Engines holding down bolts **6.1.48.**  
Completion of fitting sea connections **6.1.48.** Completion of pumping arrangements **9.4.48.** Engines tried under working conditions **13.4.48.**  
Crank shaft, Material - Identification Mark - Flywheel shaft, Material - Identification Mark **LLOYD'S 9445**  
Thrust shaft, Material **inc. in ME.** Identification Mark - Intermediate shafts, Material **O.H.S.** Identification Marks **CP. 27/1/47.**  
Tube shaft, Material - Identification Mark - Screw shaft, Material **O.H.S.** Identification Mark **LLOYD'S 9443**  
**CP. 27/1/47.**  
Identification Marks on Air Receivers

**3 air receivers:**  
**2 off at P.S. aft 57645 A.R.S. 30.4.46.**  
**1 off S.S. aft. 63198 12/11/47 A.R.S.**

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 **Foam portable.**  
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 **No** If so, state name of vessel -

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
The above machinery has been installed under Special Survey in accordance with the Rules, approved plans and the Secretary's letters.  
The materials used and workmanship are good.  
The main and aux. machinery has been examined under working conditions on completion and found satisfactory.  
Eligible in our opinion to be classed **+L.M.C. 4.48** with T.S.O.G.  
and to have the Notations:  
**Oil engines 2 S.C.S.A. 5 cyls. N.H.P. 184**

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

The amount of Entry Fee *See Glasgow Rpt. No. 72728.*  
Special ... £ : : When applied for, 19  
Donkey Boiler Fee ... £ : : When received, 19  
Travelling Expenses (if any) £ : : 19

Committee's Minute **FRI. 23 MAY 1948**  
Assigned **+LMC 4.48 Oil Eng. 0.6.**

**M. Chambers, for J.B. Goodwin & Self**  
Engineer Surveyor to Lloyd's Register of Shipping  
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