

REPORT ON OIL ENGINE MACHINERY.

No. 116490
Dec 22 1938

Received at London Office

Date of writing Report 1st December 1938 When handed in at Local Office 5th December 1938 Port of Middlesbrough

No. in Survey held at South Bank-on-Tees Date, First Survey Feb 22nd Last Survey Dec 1938

Reg. Book. Single on the M.V. "CERION" Screw vessels M.V. "CERION" Number of Visits 35

Master South Bank Built at South Bank By whom built Smith's & Co Ltd Yard No. 1054 When built 1928-19

Engines made at Amsterdam By whom made H.V. Werkspoor Engine No. 725 When made 1938

Donkey Boilers made at Stockton By whom made Stockton R.C. & Riley Bros Ltd Boiler No. 6287 When made 1938

Brake Horse Power Owners Anglo-Daxon Petroleum Co. Ltd Port belonging to London

Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

OIL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders No. of cylinders No. of cranks Diameter of cylinders

Length of stroke Revolutions per minute Means of ignition Kind of fuel used

Is there a bearing between each crank Span of bearings (Part 92, Section 2, par. 7 of Rules)

Distance between centres of main bearings Is a flywheel fitted Diameter of crank shaft journals as per Rule as fitted

Diameter of crank pins Breadth of crank webs as per Rule as fitted Thickness of dillo as per Rule as fitted

Diameter of flywheel shaft as per Rule as fitted Diameter of propeller shaft as per Rule as fitted Diameter of thrust shaft as per Rule as fitted

Diameter of screw shaft as per Rule as fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube

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 joints burned yes

If the liner does not fit tight 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 If without liners, is the shaft arranged to run in oil yes

Type of outer gland fitted to stern tube Length of stern bush Diameter of propeller

Pitch of propeller No. of blades state whether moveable Total surface square feet

Method of reversing Is a governor or other arrangement fitted to prevent racing of the engine when declutched Thickness of cylinder liners

Are the cylinders fitted with safety valves Means of lubrication Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being siphoned back to the engine above

1 Rotary M. Eng. 1 Stand by Centrifugal and General Service Pump.

No. of cooling water pumps Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

No. of bilge pumps fitted to the main engines Diameter of ditto Stroke

Can one be overhauled while the other is at work yes No. of auxiliary pumps connected to the main bilge lines How driven

Sizes of pumps No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 3-5" & 2-2" Effortless

and in holds, etc. 2-3" in each hold. 1-2" Pump Room. No. of ballast pumps 2 How driven Steam Sizes of pumps 10" x 8 1/2" x 10"

Cooling water Pump (Stand by)

Is the bilge pump fitted with a direct suction from the engine room bilges yes State size 5" Is a separate auxiliary pump suction fitted in Engine Room and size yes 4" G.S. Pump

Are all the bilge suction pipes fitted with roses yes Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges yes

Are the sluices on Engine Room bulkheads always accessible yes Are all connections with the sea direct on the skin of the ship yes

Are they valves or cocks both Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates yes

Are the discharge pipes 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 all pipes, cocks, valves and pumps in connection with the machinery accessible at all times yes Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges yes

Is the screw shaft tunnel watertight yes Is it fitted with a watertight door yes

worked from yes If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

No. of main air compressors No. of stages Diameters Stroke Driven by

No. of auxiliary air compressors No. of stages Diameters Stroke Driven by

No. of small auxiliary air compressors see if run by Report No 20546 No. of stages Two Diameters 3 1/2" & 7 1/2" Stroke 4 1/2" Driven by Clutch drive from Steam Dynamometer

No. of scavenging air pumps Diameter Stroke Driven by

Diameter of auxiliary Diesel Engine crank shafts as per Rule as fitted Are the air compressors and their coolers made so as to be easy of access

AIR RECEIVERS:—

No. of high pressure air receivers Internal diameter Cubic capacity of each

material Seamless, lap welded or riveted longitudinal joint Range of tensile strength

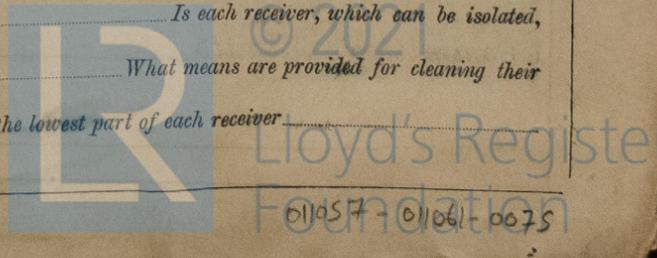
thickness working pressure by Rules No. of starting air receivers Internal diameter

Total cubic capacity Material Seamless, lap welded or riveted longitudinal joint

Range of tensile strength thickness Working pressure by rules Is each receiver, which can be isolated, fitted with a safety valve as per Rule

inner surfaces Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
" " COVERS					
" " JACKETS.....					
" " PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING					
" INJECTION					
AIR PIPES	26. 10. 38	350	850	R1 ✓	✓
FUEL PIPES <i>Burning line</i>	12. 11. 38	100	400	✓	✓
FUEL PUMPS					
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting Receivers Separate Tanks
(If not, state date of approval)

SPARE GEAR *as per Rules and. 1 throw crank shaft 1 screw shaft 2 sets thrust pads 1 cyl head 2 jackets 2 liners & eccentrics. 1 piston rod 1 connecting rod Chain & wheels for main & pump shafts Bearing brasses for bottom end. Main, cam shaft & pump shafts. Ball bearings & flexible coupling for pump shaft. Armature & brush gear for turning engine & a considerable amount of spare gear for auxiliaries*

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

W. W. W. W.
Manufacturer.

Dates of Survey while building
 During progress of work in shops --
 During erection on board vessel --
 Total No. of visits

Feb. 22, 23, Mar. 11, May 2 & 31, June 9, July 11, 18, 22, Aug. 23, Sept 8, 15, 19, 21, 24, 28, Oct 3, 5, 6, 13, 16, 21, 26, Nov. 1, 11, 12, 14, 15, 16, 17, 18, 22, 29
 Dec. 1.

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
 Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine sealings ✓
 Engines holding down bolts 14. 10. 38 Completion of pumping arrangements 17. 11. 38 Engines tried under working conditions 18. 7. 29 - 11. 38
 Completion of fitting sea connections 24. 5. 38 Stern tube 18. 7. 38 Screw shaft and propeller 22. 7. 38
 Material of crank shaft Identification Mark on Do. Material of thrust shaft Identification Mark on Do.
 Material of tunnel shafts Identification Marks on Do. Material of screw shafts Identification Marks on Do.
 Is the flash point of the oil to be used over 150° F. *yes.*
 Is this machinery duplicate of a previous case If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery described in our Rpt 15359, 15162 & 9ms Rpt 20546 has been fitted on board in accordance with the Requirements of the Rules & the approved Plan of Pumping Arrangement. all required tests have been satisfactorily held. The machinery examined under full working conditions. The vessel is eligible in my opinion to have the Record + LMC 12. 38.

The amount of Entry Fee ... £ : : When applied for,
 Special *1/2 fee* ... £ 11 : 3 : 21. 12. 19. 38
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 1. 2. 19. 38

R. Colloff
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 6 JAN 1939
 Assigned + LMC 12. 38 CL
 DB 10 lb
 Del. E. W.



The Surveyors are requested not to write on or below the space for Committee's Minute.