

## REPORT ON OIL ENGINE MACHINERY.

No. 5711

29 OCT 1925  
20 FEB 1926

Surveying Report *Oct 28 1925* When handed in at Local Office *Oct 28 1925* Port of *MANCHESTER*  
 Survey held at *MANCHESTER* Date, First Survey *May 22 23* Last Survey *Oct 20 1925*  
 on the *Single* *Triple* *Double* *Anglo American Oil Barge* Tons *Gross* *Net*  
 Built at *Amble* By whom built *Amble S.B. Co* Yard No. *40* When built  
 Made at *Manchester* By whom made *L. Gardner & Sons Ltd* Engine No. *2650* When made *1925*  
 Boilers made at By whom made Boiler No. When made  
 Horse Power *140* Owners Port belonging to  
 Horse Power as per Rule *40* Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Vertical Semi Diesel Crank Case Compression  
 ENGINES, &c.—Type of Engines *Air Starting. 2 ports in Cylinder* 2 or 4 stroke cycle *2* Single or double acting *Single*  
 Maximum pressure in cylinders *300* No. of cylinders *4* No. of cranks *4* Diameter of cylinders *11 1/2"*  
 of stroke *12 1/2"* Revolutions per minute *320* Means of ignition *Hot Bulb (Blow Lamp)* Kind of fuel used *Heavy oil*  
 Is a bearing between each crank *Yes* Span of bearings (Page 92, Section 2, par. 7 of Rules) *17 1/2"*  
 Is a flywheel fitted *Yes* Diameter of crank shaft journals as per Rule *4.95* as fitted *5.125"*  
 Breadth of crank webs as per Rule *6.6* as fitted *6.75"* Thickness of ditto as per Rule *2.77* as fitted *3.0"*  
 Diameter of tunnel shaft as per Rule *3.43* as fitted *3 1/2"* Diameter of thrust shaft as per Rule *3.6* as fitted *95 mm*  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes but in 3 pieces*  
 If the liner is in more than one length are the joints burned *No*  
 Is the space charged with a plastic material insoluble in water and non-corrosive *File tightly*  
 Is the shaft lapped or protected between the liners *Lined butted* If without liners, is the shaft arranged to run in oil *Yes*  
 Length of stern bush *19"* Diameter of propeller *52"*  
 Total surface *8 ft<sup>2</sup>* square feet  
 Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Thickness of cylinder liners *✓*  
 Means of lubrication *Main Bearings forced* Are the exhaust pipes and silencers water cooled or lagged with  
 Insulating material *Yes* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine  
 No. of cooling water pumps *one on main engine* Is the sea suction provided with an efficient strainer which can be cleared  
 No. of bilge pumps fitted to the main engines *one on main engine* Diameter of ditto *1 3/4"* Stroke *3"*  
 No. of auxiliary pumps connected to the main bilge lines How driven  
 No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room  
 No. of ballast pumps How driven Sizes of pumps  
 Is a separate auxiliary pump suction fitted in  
 Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible  
 Are all connections with the sea direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates  
 Are they each fitted with a discharge valve always accessible on the plating of the vessel  
 Are the bilge suction pipes, cocks and valves arranged so as to prevent any  
 Is the screw shaft tunnel watertight Is it fitted with a watertight door  
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork  
 No. of stages *one* Diameters *6"* Stroke *3"* Driven by *Main Ct. 8 1/2" Extension*  
 No. of stages *one* Diameters *3 1/2"* Stroke *2"* Driven by *Gardner 3000 Type engine*  
 No. of stages Diameters Stroke Driven by  
 Diameter Stroke Driven by  
 Are the air compressors and their coolers made so as to be easy of access

RECEIVERS:—No. of high pressure air receivers Internal diameter Cubic capacity of each  
 Seamless, lap welded or riveted longitudinal joint Range of tensile strength  
 working pressure by Rules No. of starting air receivers *3* Internal diameter *1 1/8" = 12.5"*  
 Material *Mild Steel* Seamless, lap welded or riveted longitudinal joint *Chesterfield Seamless*  
 Working pressure by rules *463 lbs./sq. in.* Is each receiver, which can be isolated,  
 Can the internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their  
 Is there a drain arrangement fitted at the lowest part of each receiver *Yes*



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 .....	5.8.25	300 lbs	600 lbs	FL	
" " COVERS .....	5.8.25				
" " JACKETS.....					
" " PISTON WATER PASSAGES.....	✓	✓	✓	✓	
MAIN COMPRESSORS—1st STAGE.....	✓	✓	✓	✓	
" 2nd " .....	✓	✓	✓	✓	
" 3rd " .....	✓	✓	✓	✓	
AIR RECEIVERS—STARTING .....	14.8.25 and 20.8.25	250 lbs	500 lbs	FL	
" INJECTION .....	✓	✓	✓	✓	
AIR PIPES .....					
FUEL PIPES .....					
FUEL PUMPS .....					
SILENCER .....					
" WATER JACKET .....	28.5.25	✓	50 lbs	FL	
SEPARATE FUEL TANKS .....	4.9.25	✓	157 lbs	C.W.R.	Tested at 150 lbs. See letter after

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

Yes

Receivers

Yes

Separate Tanks

Yes.

SPARE GEAR

The foregoing is a correct description,

William Gardner.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1925. May 22, 29, June 3, July 1, 9, 15, 23, Aug. 5, 6, 10, 14, 20, Sept 15, 21, 29, Oct 20  
During erection on board vessel - -  
Total No. of visits

Dates of Examination of principal parts—Cylinders 5.8.25 Covers 5.8.25 Pistons 5.8.25 Rods ✓ Connecting rods 6. Crank shaft 9.7.25 Thrust shaft 15.7.25 Tunnel shafts 15.9.25 Screw shaft 15.9.25 Propeller Stern tube Engine seatings Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions Completion of fitting sea connections Stern tube Screw shaft and propeller Material of crank shaft Mild Steel Identification Mark on Do. 983 FL Material of thrust shaft Mild Steel Identification Mark on Do. 995 Material of tunnel shafts Mild Steel Identification Marks on Do. 13 RM Material of screw shafts Mild Steel Identification Marks on Do. 104

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

Is this machinery duplicate of a previous case Yes

If so, state name of vessel

No 39. Amble S.B.C (Rich Rpt)

General Remarks

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

The above main engine of Gardner Type 4 TB and auxiliary engines of Gardner Type 30CR and 2V have been built under special survey and the materials and workmanship so far as tested in accordance with the rules of this Society. The materials and workmanship so far as be seen are sound and good, and the engines proved satisfactory under shop test. The following is a description of the 2 Amp. sets:— 1-30CR Gardner 45.5SA Engine No. 26505 clutch coupled to Clutch Clapnet 206994. 110 Volts. 55 amps. 800 R.P.M.; clutch coupled on other side with interlocking clutch gear to pinion pump & again clutch coupled beyond this to a Gardner 3 1/2 HP No 350 Air Compressor. 1-2V Gardner Engine No. 26523 clutch coupled to chain sprocket for bilge pump and again clutch coupled beyond this to sprocket for ballast pump. The above engines are in my opinion shippable for the notation + L. date when they are fitted on board the vessel in accordance with the Society's requirements.

The amount of Entry Fee ... £ 2 : 0 : When applied for,

Special ... £ 15 : 0 : Oct 25 1925

Donkey Boiler Fee ... £ 13 : 12 : When received, as per 10/11

Travelling Expenses (if any) £

Amount charged to L. Gardner & Co. = 4/6 1/2 17-0-0 + 13-12-0

Committee's Minute FRI. 26 FEB 1926

Assigned

See Awe J. E. rpt 80132

Engineer Surveyor to Lloyd's Register of Shipping



© 2021

Lloyd's Register Foundation