

Copy Manchester rept. No. 5042.

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY

500. No. 11429

Date of writing Report 10 When handed in at Local Office 10 Port of Manchester Received at London Office MON. JAN. 8 1923

No. in Survey held at Manchester Date, First Survey 8th July Last Survey 14/12/22 see over

Reg. Book. Single on the Twin } Screw vessels "BRITISH SPARK" Number of Visits 19

Master Bowes Built at Cowes By whom built J.S. White & Co. Ltd Yard No. 1592 When built 1922

Engines made Patricroft, Manchester whom made L. Gardiner & Sons Engine No. 1 When made 1922

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

Brake Horse Power 48 Owners British Petroleum Co. Ltd Port belonging to Manchester

Nom. Horse Power as per Rule 13.7 ¹⁴ Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

OIL ENGINES, &c.—Type of Engines Vertical (size 45 H.M.) 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 250 lbs No. of cylinders 4 No. of cranks 4 Diameter of cylinders 6 1/2"

Length of stroke 7 1/2" Revolutions per minute 600 Means of ignition High tension Magnets Kind of fuel used Paraffin oil

Is there a bearing between each crank yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 12"

Distance between centres of main bearings 12 Is a flywheel fitted yes Diameter of crank shaft journals as per Rule 2.6" as fitted 2.75"

Diameter of crank pins 2 3/4" Breadth of crank webs as per Rule 3.5" as fitted 4.0" Thickness of ditto as per Rule 1.5" as fitted 1.75"

Diameter of flywheel shaft as per Rule 2.6" as fitted 2.75" Diameter of tunnel shaft as per Rule 2 1/8" as fitted 2 1/8"

Diameter of screw shaft as per Rule 2.08" as fitted 2 1/4" Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner

Is the after end of the liner made watertight in the propeller boss ✓ If the liner is in more than one length are the joints burned ✓

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 ✓ If without liners, is the shaft arranged to run in oil no

Type of outer gland fitted to stern tube none Length of stern bush 9 1/2" Diameter of propeller 2.6"

Pitch of propeller 1.6" No. of blades 3 state whether moveable no Total surface 2.15 square feet

Method of reversing Dutch Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Thickness of cylinder liners 9/16"

Are the cylinders fitted with safety valves no Means of lubrication forced Are the exhaust pipes and silencers water cooled or lagged with non-conducting material water cooled If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Submerged

bone water line, with Swan neck pipe No. of cooling water pumps one Is the set suction provided with an efficient strainer which can be cleared within the vessel yes No. of bilge pumps fitted to the main engines one rotary Capacity of ditto 400 galls. per hour Diameter of ditto 100 rev. p.m.

Can one be overhauled while the other is at work yes No. of auxiliary pumps connected to the main bilge lines none How driven ✓

Sizes of pumps Cofferdam Two-2" No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room One-2" and in holds, etc. CARGO OIL No. of bilge pumps one How driven chain from main engine Sizes of pumps 6x6" Duplex

Is the bilge pump fitted with a direct suction from the engine room bilges yes State size 2" Is a separate auxiliary pump suction fitted in Engine Room and size no Are all the bilge suction pipes fitted with roses yes Are the roses in Engine Room always accessible yes

Are the sluices on Engine Room bulkheads always accessible not fitted Are all connections with the sea direct on the skin of the ship yes

Are they valves or cocks valves 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 no Is it fitted with a watertight door ✓

worked from ✓ 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 main air compressors None No. of stages None Diameters None Stroke None Driven by None

No. of auxiliary air compressors None No. of stages None Diameters None Stroke None Driven by None

No. of small auxiliary air compressors None No. of stages None Diameters None Stroke None Driven by None

No. of scavenging air pumps None Diameter None Stroke None Driven by None

Diameter of auxiliary Diesel Engine crank shafts as per Rule None as fitted None Are the air compressors and their coolers made so as to be easy of access None

AIR RECEIVERS:—No. of high pressure air receivers None Internal diameter None Cubic capacity of each None

material Seamless, lap welded or riveted longitudinal joint Range of tensile strength None

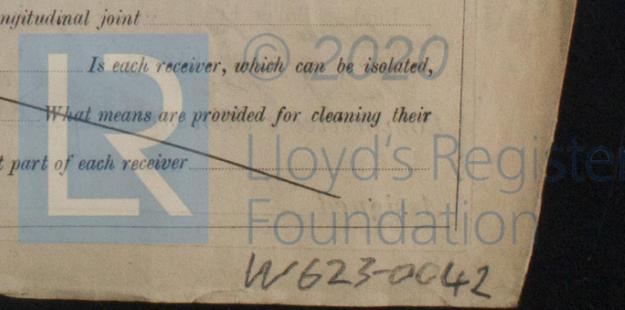
thickness working pressure by Rules No. of starting air receivers None Internal diameter None

Total cubic capacity None Material Seamless, lap welded or riveted longitudinal joint

Range of tensile strength thickness Working pressure by rules None Is each receiver, which can be isolated, None

fitted with a safety valve as per Rule None Can the internal surfaces of the receivers be examined None What means are provided for cleaning their inner surfaces None

Is there a drain arrangement fitted at the lowest part of each receiver None



IS A DONKEY BOILER FITTED? *none*

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS		Maximum 250 lbs sq	500 lbs.	LLOYDS TEST	
" " COVERS				" <i>A</i>	
" " JACKETS.....		57 lbs sq	30 lbs.	"	
" PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING					
" INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER		10 lbs sq	50 lbs. sq	LLOYDS TEST	
" WATER JACKET		5 lbs "	50 lbs "	" <i>A</i>	
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *yes*

Receivers

Separate Tanks

SPARE GEAR

The pair crank shaft bearing brasses (end bearings only) one pair of bolts for connecting rod bottom end, one pair bottom end brasses, 12 piston rings, one each inlet exhaust and air valves, one each valve spring, 2 sparking plugs.

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

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
 Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube *7.12.22* Engine seatings *22.11.*
 Engines holding down bolts Completion of pumping arrangements *14.12.22* Engines tried under working conditions *14.12.22*
 Completion of fitting sea connections *22.11.22* Stern tube *22.11.22* Screw shaft and propeller *22.11.22*

Material of crank shaft Identification Mark on Do. Material of thrust shaft Identification Mark on Do.
 Material of tunnel shafts *none* Identification Marks on Do. Material of screw shafts *Steel* Identification Marks on Do. *T.G.M. 7.12.22*

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

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. *These oil engines were built under special survey and the materials tested in accordance with the Rules of this Society. The materials and workmanship so far as can be seen are sound and good, and the engine is eligible in my opinion to be classed + LMC 12.22 oil engine. This engine has been fitted to start on petrol instead of hot bulb.*

The amount of Entry Fee ... £ 12 : 0
 Special ... £ :
 Donkey Boiler Fee ... £ 3 : 0
 Travelling Expenses (if any) £ :
 Entry Fee 2 0
 Committee's Minute

When applied for *14.10.1922*
 When received *5.12.1922*
 (Signed) *R. Campbell*, J.G. Mackenzie
 Engineer Surveyor to Lloyd's Register of Shipping.

Assigned

+ L.M.C. 12.22
Paraffin Motor

CERTIFICATE WRITTEN



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