

REPORT ON OIL ENGINE MACHINERY.

Received at London Office

18 OCT. 1922

pt. 4b.

Date of writing Report

17-10-1922 Port of Manchester

Date in Survey held at

Manchester Date, First Survey 8 July 1922 Last Survey 11 Oct. 1922

Number of Visits

7

on the ^{Single} ^{Twin} ^{Triple} Screw vessels

Paraffin oil engine for J. S. White & Co. 16 5/8 (1592) Tons

Master

Built at Cowes.

By whom built J. S. White & Co.

Yard No. 1592 When built

Engines made at

Patricroft, Manchester

By whom made L. Garman & Son

Engine No. 2 When made 1922-10

Boiler No. 1592 When made

Monkey Boilers made at

By whom made

Indicated Horse Power 48

Owners British Tankers Ltd.

Port belonging to

Net Horse Power as per Rule 137 14

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

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

Maximum pressure in cylinders 250 lbs 4" 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 No 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 1/16" as fitted 2 1/16"

Diameter of screw shaft as per Rule 2 0/8" 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 yes If the liner is in more than one length are the joints burned yes

Does the liner do 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

Are two liners fitted, is the shaft lapped or protected between the liners yes If without liners, is the shaft arranged to run in oil no

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

Number of blades 3 state whether moveable no Total surface 2.15 square feet

Method of reversing Clutch 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 conducting material water cooled

Is the exhaust led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Exhaust

Is a seawater line, with Swan neck pipe, No. of cooling water pumps one Is the sea suction provided with an efficient strainer which can be cleared

in the vessel yes No. of bilge pumps fitted to the main engines one rotary Capacity 700 gallons per hour at 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

Number of pumps 2 No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room one - 2"

Are there any pumps in holds, etc. none No. of pumps one How driven Chain from main engine Sizes of pumps 6 x 6" 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 the 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 yes Is it fitted with a watertight door yes

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

Number of main air compressors none No. of stages Diameters Stroke Driven by

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

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

Number 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

RECEIVERS:—No of high pressure air receivers none Internal diameter Cubic capacity of each

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

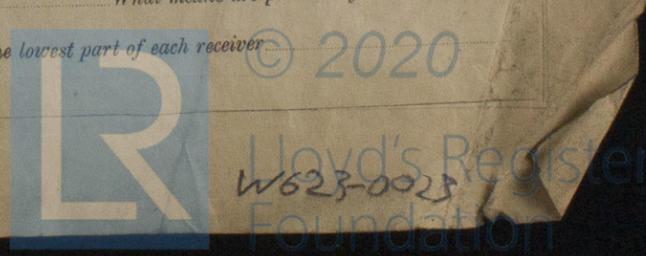
Thickness working pressure by Rules No. of starting air receivers Internal diameter

Material Seamless, lap welded or riveted longitudinal joint

Range of tensile strength thickness Working pressure by rules Is each receiver, which can be isolated,

protected with a safety valve as per Rule Can the internal surfaces of the receivers be examined What means are provided for cleaning their

internal 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:-

Table with columns: DESCRIPTION, DATE OF TEST, WORKING PRESSURE, TEST PRESSURE, STAMPED, REMARKS. Rows include ENGINE CYLINDERS, MAIN COMPRESSORS, AIR RECEIVERS, FUEL PIPES, FUEL PUMPS, SILENCER, WATER JACKET, SEPARATE FUEL TANKS.

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

SPARE GEAR

One pair crank shaft bearing brasses (with bearings only), one pair of bolts for connecting rod bottom nut, one pair bottom nut brasses, 12 piston rings, one each inlet, exhaust and air valves, one each valve springs, 2 Sparking plugs.

The above spares are intended for each or any of J. S. White & Co. oil barges 1591/2/3 For J. SAMUEL WHITE & COMPANY, Ltd

The foregoing is a correct description,

FOR L. Gardner & Sons Limited, E. Bergmann, Manufacturer. A. Campbell, Managing Director.

Dates of Survey while building: During progress of work in shops (8/7/22, 12/7/22, 14/7/22, 21/7/22, 18/8/22, 7/9/22, 11/10/22 = 7 visits), During erection on board vessel (24/10/22, 7/12/22, 15/12/22, 15/12/22, 16/12/22 = 5 visits), Total No. of visits

Dates of Examination of principal parts: Cylinders 12/7/22, Covers 12/7/22, Pistons 12/7/22, Rods, Connecting rods 21/7/22, Crank shaft 14/7/22, Thrust shaft 14/7/22, Tunnel shafts none, Screw shaft 7.12.22, Propeller 7.12.22, Stern tube 7.12.22, Engine seatings 7.12.22, Engines holding down bolts 14.12.22, Completion of pumping arrangements 15.12.22, Engines tried under working conditions 15.12.22, Completion of fitting sea connections 14.12.22, Stern tube 14.12.22, Screw shaft and propeller 14.12.22, Material of crank shaft mild steel, Identification Mark on Do. Material of thrust shaft mild steel, Identification Mark on Do. Material of tunnel shafts none, Identification Marks on Do. Material of screw shafts mild steel, Identification Marks on Do. J.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? yes. If so, state name of vessel 'British Spark'

General Remarks (State quality of workmanship, opinions as to class, &c.) This oil engine has been 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 as L.M.C. oil engine. This engine has been fitted to start on petrol instead of hot-bull.

Identification mark on headplate These engines have been well fitted on board & tried under full working conditions of sound satisfactory.

LLOYDS No. 2 18/8/22 25321

The amount of Entry Fee ... £ 12 0 0 Special ... £ 19 10 0 Donkey Boiler Fee ... £ Travelling Expenses (if any) £ 3 0 5 13 19 22 London (£12) Entry Fee 2 0 0 23 66 Committee's Minute FRI. JAN. 12 1923

A. Campbell, J.G. Mackenzie, Engineer Surveyor to Lloyd's Register of Shipping.

Assigned + L.M.C. 12.22 Paraffin Motor



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

CERTIFICATE WRITTEN