

REPORT ON OIL ENGINE MACHINERY.

No. 52469.

RECEIVED
14 JUN 1944
IN D.O.

Received at London Office

14 JUN 1944

Date of writing Report

When handed in at Local Office

Port of

HULL

No. in Survey held at
eg. Book.

Knottingley.

Date, First Survey 29.9.43.

Last Survey 3.6.44. 19

Number of Visits 15.

7447 on the Single
Four
Triple
Quadruple

Screw

Motor Tanker "EMPIRE ALDERNEY".

A/MS 678

Tons { Gross 300
Net -

Built at Knottingley.

By whom built John Harker Ltd.

Yard No. 166

When built 1944

Engines made at Openshaw, Manchester

By whom made Crossley Bros. Ltd.

Engine No. 131668

When made 1943/4

Key Boilers made at -

By whom made -

Boiler No. -

When made -

ake Horse Power 55 330

Owners Ministry of War Transport

Port belonging to Goole

om. Horse Power as per Rule 116

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ade for which vessel is intended For carrying petroleum in bulk.

2 ENGINES, &c. Type of Engines Crossley 6 cycle H.R.6 Int. com 2 or 4 stroke cycle 2 Single or double acting S.A. Airless Injection heavy oil

imum pressure in cylinders 850lbs Diameter of cylinders 10'5" Length of stroke 13'5" No. of cylinders 6 No. of cranks 6

an Indicated Pressure 76lbs

in of bearings, adjacent to the Crank, measured from inner edge to inner edge 14.875 Is there a bearing between each crank Yes

olutions per minute 300 Flywheel dia. 37.5" Weight 2166lbs. Means of ignition compression Kind of fuel used Diesel Oil

ank Shaft, { Solid forged as per Rule approved dia. of journals as fitted 7 1/2" Crank pin dia. 7 1/4" Crank Webs Mid. length breadth 9 1/4" Thickness parallel to axis -

Mid. length thickness 3:23/32" Thickness around eyehole -

rwheel Shaft, diameter as per Rule approved on M.E. Flywheel mounted on M.E. Intermediate Shafts, diameter as per Rule approved as fitted 4 1/2" Thrust Shaft, diameter at collars as per Rule approved as fitted 4 1/2"

the Shaft, diameter as per Rule approved as fitted 4 7/8" at top of cone Is the tube screw shaft fitted with a continuous liner No.

onze Liners, thickness in way of bushes as per Rule - Thickness between bushes 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 -

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 -

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

Yes If so, state type Vista Length of Bearing in Stern Bush next to and supporting propeller 2'0"

opeller, dia. 68" Pitch 48" No. of blades 4 Material C.I. whether Moveable No Total Developed Surface 12 sq. feet

ethod of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication

Forced Thickness of cylinder liners 7/8" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

manifold-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 Ex. led

ooling Water Pumps, No. 1-M.E. 4 1/2" x 3" Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes, Bilge & cooling water pumps interchangeable.

lge Pumps worked from the Main Engines, No. 1 Diameter 4 1/2" Stroke 3 Can one be overhauled while the other is at work Yes.

umps connected to the Main Bilge Line { No. and Size 1-4 1/2" x 3", 1-2 1/2" 45 tons/hr Hamworthy cent. self priming. How driven M.E. Independent Aux. engine.

the cooling water led to the bilges No, overboard so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

rangements -

allast Pumps, No. and size 1-2 1/2" as above Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size two in series on M.E. 1 1/8" & 1 1/4" x 2"

re two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

umps, No. and size: - In Machinery Spaces E.R. 2-2" connected to centrif. pump in E.R. In Pump Room

Holds, &c. F.P.T. 1-2" for'd cofferdam 1-2" Aft coff. 1-2" hand pump. Stbd. pump Rm. 1-2" Hand pump. Port -do- -do-

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2" and one 2" emergency

re all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

l from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

re all Sea Connections fitted direct on the skin of the ship On robust E.W. steel boxes Are they fitted with Valves or Cocks Cocks

re 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

re 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 -

That pipes pass through the bunkers none How are they protected -

That pipes pass through the deep tanks - Have they been tested as per Rule -

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times -

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

mpartment to another Yes Is the Shaft Tunnel watertight Part of E.R. filled with a watertight door - worked from -

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

lain Air Compressors, No. one No. of stages 2 Diameters 5 1/2" & 2 1/2" Stroke 4 Driven by M.E.

uxiliary Air Compressors, No. one No. of stages see Nottingham Report 10 No. 2176 Driven by Ruston Hornsby

small Auxiliary Air Compressors, No. one No. of stages embodied in above aux. (hand starting) Driven by Diesel eng.

What provision is made for first Charging the Air Receivers Ruston & Hornsby Aux. engine hand starting Driven by "Fowler" oil eng.

Scavenging Air Pumps, No. one double acting Diameter 20 1/2" Stroke 9 1/4" Driven by M.E.

Auxiliary Engines crank shafts, diameter as per Rule see Nott. Rpts. 10 No. 2- Position -

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith

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Foundations Register

AIR RECEIVERS:—Have they been made under survey **Yes** ✓ State No. of Report or Certificate **C.372 & C.373 E.2224 LR test 7001**
Is each receiver, which can be isolated, fitted with a safety valve as per Rule **S.V. on line & fusible plug in each receiver.** **350 lbs 2/7/41 JNB**
Can the internal surfaces of the receivers be examined and cleaned **Yes** **5/12/40. 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. **Two** ✓ Total cubic capacity **30 cu.ft.** Internal diameter **2 1/8"** thickness **3/8" & 15/32"**
Seamless, lap welded or riveted longitudinal joint **riveted and welded.** Material **S.M. steel** Range of tensile strength **26/30%** Working pressure by Rules **350 lbs** Actual **-do-**
IS A DONKEY BOILER FITTED? **-** 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 **16.4.43 & 12.3.43** Receivers **-** Separate Fuel Tanks **7.5.43.**
(If not, state date of approval)
Donkey Boilers **-** General Pumping Arrangements **22.9.43.** Pumping Arrangements in Machinery Space **-**
~~Oil Fuel Pumping Arrangements~~ **& air piping 29.9.43.** **SPARE GEAR.**
Has the spare gear required by the Rules been supplied **As per Requirements.** ✓
State the principal additional spare gear supplied **-**

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops - } **see Manchester Report No. 11492**
{ During erection on board vessel - } **1943. Sep. 29, Dec. 3, 6, 11, 1944. Feb. 11, 14. Mar. 8. April. 4, 7, 18, May 9, 19, 22, June 3. 15**
Total No. of visits **15**

Dates of Examination of principal parts—Cylinders **see Manchester Report No. 11492** Covers **see Manchester Report No. 11492** Pistons **see Manchester Report No. 11492** Rods **see Manchester Report No. 11492** Connecting rods **see Manchester Report No. 11492**
Crank shaft **see Manchester Report No. 11492** Flywheel shaft **see Manchester Report No. 11492** Thrust shaft **see Manchester Report No. 11492** Intermediate shafts **see Manchester Report No. 11492** Tube shaft **see Manchester Report No. 11492**
Screw shaft **6.12.43.** Propeller **6.12.43.** Stern tube **6.12.43.** Engine seatings **29.9.43.** Engines holding down bolts **14.2.44.**
Completion of fitting sea connections **11.12.43.** Completion of pumping arrangements **23.5.44.** Engines tried under working conditions **23.5.44.**
Crank shaft, Material **O.H. steel** Identification Mark **L.R. 1661 C.S.N. 18/1/43** Flywheel shaft, Material **-** Identification Mark **-**
Thrust shaft, Material **-do-** Identification Mark **L.R. 1954 D.A.T. E.L.R. 4/2/43.** Intermediate shafts, Material **F.I.** Identification Marks **L.R. 262 JNB 21/7/43**
Tube-shaft, Material **-** Identification Mark **-** Screw shaft, Material **F.I.** Identification Marks **L.R. 259 JNB 21/7/43**
Identification Marks on Air Receivers **see Manchester Report No. 11492**

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** ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo **-** 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 **-** If so, state name of vessel **similar to Messrs. Richards Iron**
General Remarks (State quality of workmanship, opinions as to class, &c. **The machinery of this vessel has been installed in accordance with the Rules, Specification, approved plans & Secretary's letters. The workmanship and materials are good.**
Eligible in my opinion to be classed +LMC 6,44 O.G. Oil Engine 2 S.C.S.A. 6 cylinders, 10 1/2" dia. 13 1/2" stroke. 116 N.H.P.

The amount of Entry Fee .. £ **5** : - : When applied for, **12 JUN 1944**
Fitting out (LMC) .. £ **5** : - :
Specification .. £ **7** : 5 :
Donkey Boiler Fee .. £ : : When received, **19**
Travelling Expenses (if any) £ : : **19**

Committee's Minute

Assigned

TUES 18 JUL 1944

+LMC 6,44 Oil Eng
89

W.S. Shivas

Engineer Surveyor to Lloyd's Register of Shipping.



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