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Rpt. 4b.

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REPORT ON OIL ENGINE MACHINERY.

No. 52188.

28 OCT 1943

Received at London Office

HULL

Date of writing Report 25.10.43 When handed in at Local Office 25.10.43 Port of HULL

No. in Survey held at Thorne Hull Date, First Survey 28.7.43 Last Survey 20.10.1943
Reg. Book. Number of Visits 7

on the Single Screw vessel "EMPIRE SKIPPER" Tons { Gross 313 Net 143

Built at Thorne By whom built Richard Dundon Ltd. Yard No. T 395 When built 1943

Engines made at Manchester By whom made Crossley Bros. Ltd. Engine No. 124218 When made

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

Brake Horse Power 275 Owners Ministry of War Transport Port belonging to

Nom. Horse Power as per Rule 97 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

Trade for which vessel is intended Motor Collier See Manchester Report No 11417

IL ENGINES, &c.—Type of Engines Vertical Airless Injection 2 or 4 stroke cycle 2 Single or double acting SA

Maximum pressure in cylinders 800 lb Diameter of cylinders 10 1/2" Length of stroke 13 1/2" No. of cylinders 5 No. of cranks 5

Mean Indicated Pressure 76 lb Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 14 1/16" Is there a bearing between each crank YES

Revolutions per minute 300 Flywheel dia. 37 1/2" Weight 2166 lbs. Means of ignition Compression Kind of fuel used Diesel Oil

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

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 4 1/2" Thrust Shaft, diameter at collars as per Rule as fitted 4 3/4"

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 5" Is the { tube screw } shaft fitted with a continuous liner { no liner }

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule 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

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 Is an approved Oil Gland or other appliance fitted at the after end of the tube

shaft YES If so, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 24"

Propeller, dia. 5' 2" Pitch 3' 10" No. of blades 4 Material C.I. whether Moveable Solid Total Developed Surface 9 1/2 sq. feet

Method of reversing Engines Compressed Air Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication

Forces 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

non-conducting material Exhaust manifold If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine funnel

Cooling Water Pumps, No. One on ME 4 1/4" dia x 3" stroke Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Bilge Pumps worked from the Main Engines, No. One Diameter 4 1/4" Stroke 3" Bilge cooling pumps interchangeable YES Can one be overhauled while the other is at work YES

Pumps connected to the Main Bilge Line No. and Size One 4 1/4" x 3" ME Cyl. Cooling P. similar One 2" Hamworth self-priming centrifuge pump Handpump

How driven ME for emergency use only Ind. Diesel Is the cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements Ballast Pumps, No. and size One ME 4 1/4" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 3/4" & 1 5/8" - 2" stroke

Are two independent means arranged for circulating water through the Oil Cooler pumps can be used Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces Two 2 1/2" In Pump Room

In Holds, &c. Thru 2" in hold. One 2" in F.P. One 2" in A.P. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 2"

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

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

Are all Sea Connections fitted direct on the skin of the ship YES or on EW steel boxes Are they fitted with Valves or Cocks Both

Are 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

Are 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

What pipes pass through the bunkers home How are they protected

What pipes pass through the deep tanks home Have they been tested as per Rule YES

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

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

compartment to another YES Is the Shaft Tunnel watertight Part of Eng. room 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

Main Air Compressors, No. One No. of stages 2 Diameters 5 3/4" & 2 1/2" Stroke 4 Driven by main Eng.
Auxiliary Air Compressors, No. One No. of stages One Diameters 3 3/4" Stroke 3 1/4" Driven by Aux Eng.
Small Auxiliary Air Compressors, No. none No. of stages

What provision is made for first Charging the Air Receivers Aux. Eng. above - handstarting.
Scavenging Air Pumps, No. Two (tandem) Diameter 20 1/2" Stroke 7 3/4" Driven by ME.
Auxiliary Engines crank shafts, diameter as per Rule as fitted See Note. Rpt 10. No. Cert No. C 1470. Position
Have the Auxiliary Engines been constructed under special survey YES Is a report sent herewith YES

"E. SKIPPER."

c 3714 for E 2223

AIR RECEIVERS:—Have they been made under survey Yes State No. of Report or Certificate Not Cert. E 2223

Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes

Injection Air Receivers, No. None Cubic capacity of each Internal diameter thickness

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

Starting Air Receivers, No. Two Total cubic capacity 30 Cubft Internal diameter 24 1/8" thickness 3/8" & 1/2"

Seamless, lap welded or riveted longitudinal joint Riveted and welded Material Steel Range of tensile strength 26/30 Working pressure by Rules 350 lb

IS A DONKEY BOILER FITTED? No 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 25.6.42 Receivers 25.6.42 Separate Fuel Tanks 24.6.42

Donkey Boilers ✓ General Pumping Arrangements 6.5.42 Pumping Arrangements in Machinery Space 6.5.42

Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

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 -- During erection on board vessel -- Total No. of visits	<u>See Mch. Rpt. No 11417.</u>	
	<u>1943</u>	<u>JULY 28. AUG 18. 20. OCT 7, 13, 18, 20</u>
	<u>7</u>	

Dates of Examination of principal parts—Cylinders Covers See above report. Pistons Rods Connecting rods

Crank shaft Flywheel shaft Thrust shaft Intermediate shafts Tube shaft

Screw shaft 18.8.43 Propeller 18.8.43 Stern tube 18.8.43 Engine sealings 2/9/43 Engines holding down bolts 20/2/43

Completion of fitting sea connections 18.8.43 Completion of pumping arrangements 7/10/43 Engines tried under working conditions 7/10/43

Crank shaft, Material See Mch. Rpt. No. Identification Mark Flywheel shaft, Material Identification Mark

Thrust shaft, Material See Mch. Rpt. No. Identification Mark Intermediate shafts, Material 11417 Identification Marks

Tube shaft, Material ✓ Identification Mark Screw shaft, Material F. I. STE. Identification Mark 22.1.43

Identification Marks on Air Receivers See Manchester Rpt No 11417.

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 No 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 Yes If so, state name of vessel EMPIRE LAIRO Hull Report No 5209

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

The machinery of this vessel has been constructed as per approved plans, Secretary's letters and to the Specification, of good material and workmanship. The whole installation has been tried out under working conditions and found satisfactory in every respect. Eligible to be classed, in my opinion, with record of * LMC 10,43, 0G. Oil Engines 250.5A. 5cyl. 10 1/2" - 13 1/2". 97 NHP.

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

The amount of Entry Fee .. £	:	:	When applied for,
Special (Part A) ... £	4	0	27 OCT 1943
Donkey Boiler Fee ... £	6	1	When received,
Travelling Expenses (if any) £	:	:	19

W.S. Shields.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned + LMC 10,43 0G.

FRI. 12 NOV 1943



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