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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. 19 43.
Reg. Book. Number of Visits 7

on the Single Triple Quadruple Screw vessel "EMPIRE SKIPPER"
Built at Thorne By whom built Richard Dunsdon 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

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 Heavy Oil
Crank Shaft, { Solid forged ✓ dia. of journals as per Rule ✓ Crank pin dia. 7 1/4" Crank Webs Mid. length breadth 9 1/4" Thickness parallel to axis ✓
{ Semi built ✓ as fitted 7 1/2" Mid. length thickness 3 3/32" Thickness around eyehole ✓
Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as per Rule ✓ Thrust Shaft, diameter at collars as per Rule ✓
Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as per Rule ✓ Is the { tube ✓ shaft fitted with a continuous liner { no liner
Bronze Liners, thickness in way of bushes as per Rule ✓ Thickness between bushes as per Rule ✓ 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 No 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
Exhaust manifold 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 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
Pumps connected to the Main Bilge Line { No. and Size One 4 1/4" x 3" ME Cyl. Cooling P. similar One 2" Hamworthy self-priming Handpump ✓
How driven ME { for emergency use only centrifugal pump 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.
One Ind 2" Are two independent means arranged for circulating water through the Oil Cooler pumps can be run 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 none How are they protected ✓
What pipes pass through the deep tanks none Have they been tested as per Rule ✓
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 ✓ Diameters ✓ Stroke ✓ Driven by ✓
What provision is made for first Charging the Air Receivers Aut. Eng. above - hand starting.
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 See Nott. 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

Rpt.

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 by Rules

Actual

Starting Air Receivers, No.

Two

Total cubic capacity

30 Cub ft

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

Actual

350 lb

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

Yes

Is the donkey boiler intended to be used for domestic purposes only

Yes

PLANS. Are approved plans forwarded herewith for Shafting

25.6.42

Receivers

25.6.42

Separate Fuel Tanks

24.6.42

Donkey Boilers

Yes

General Pumping Arrangements

6.5.42

Pumping Arrangements in Machinery Space

6.5.42

Oil Fuel Burning Arrangements

Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied

Yes

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

See Mch. Rpt. No 11417.

1943 JULY 28. AUG 18, 20. OCT 7, 13, 18, 20

7

Dates of Examination of principal parts—Cylinders

Covers

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

27/8/43

Engines holding down bolts

20/8/43

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 11417

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

See Mch. Rpt. No 11417

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Yes

Identification Mark

Screw shaft, Material

F. I. STL.

Identification Mark 22.1.43.

Identification Marks on Air Receivers

See Mch. 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

Yes

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

Yes

Is this machinery duplicate of a previous case

Yes

If so, state name of vessel

EMPIRE LAIRO Hull Rpt 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 letter 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. OG. Oil Engines 25C.5A. 5cyl. 10 1/2" - 13 1/2". 97 NHP.

The amount of Entry Fee

£

:

When applied for,

Special (Part A)

£

4

:

27 OCT 1943

Donkey Boiler Fee

£

:

When received,

Travelling Expenses (if any)

£

:

19

Committee's Minute

Assigned

W. S. Shields.

Engineer Surveyor to Lloyd's Register of Shipping.



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