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27 AUG 1943

IN D.O.

## REPORT ON OIL ENGINE MACHINERY.

No. 5210

Received at London Office

24 AUG 1943

Port of

HULL

Date of writing Report

When handed in at Local Office

No. in Survey held at

Thorne

Date, First Survey

29. 12. 42

Last Survey

11. 8. 1943

Reg. Book

Number of Visits

8

Single  
Triple  
Quadruple

Screw vessel

COLLIER "EMPIRE TOWNSMAN"

Tons { Gross 313  
Net 143

Built at

Thorne

By whom built

Richard Dunsford

Yard No.

T394

When built

1943

Engines made at

Manchester

By whom made

Crossley Bros Ltd

Engine No.

124217

When made

Donkey Boilers made at

None

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 11416

OIL ENGINES, &amp;c.—Type of Engines Vertical Airless Injection 2 or 4 stroke cycle 2 Single or double acting 5A

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 7/16"

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  
Steel built  
All built

dia. of journals

as per Rule  
as fitted 7 1/2"

Crank pin dia.

7 1/4"

Crank Webs

Mid. length breadth 9 1/4"

Mid. length thickness 3 3/32"

shrink

Thickness parallel to axis

✓

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

Compression air

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

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

G.I. or G.

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 1/2" 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"

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"

How driven

ME

ME Cyl. Cooling Pump Reverser

for emergency use only

One 2" Hamworthy Cent.

Self priming

Ind. Bilge

Hand pump

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

Ballast Pumps, No. and size

One ME 4 1/4"

One ME 2"

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

Both ME 4 and Eng

3 1/4" x 1 1/8" - 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

Yes 2 1/2"

In Pump Room

✓

In Holds, &amp;c.

Three 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 E.W. 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

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" &amp; 2 1/2"

Stroke

4"

Driven by

Main Eng.

Auxiliary Air Compressors, No.

One

No. of stages

2

Diameters

3 1/2" &amp; 1 1/8"

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

Aux. Eng. above

—

how starting

✓

Scavenging Air Pumps, No.

Two (tandem)

Diameter

20 1/2"

Stroke

7 3/4"

Driven by

M.E.

Auxiliary Engines crank shafts, diameter

as per Rule  
as fitted

See Nott. cut. no. 1361

No.

Position

Have the Auxiliary Engines been constructed under special survey

Yes

Is a report sent herewith

Yes

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Lloyd's Register

Foundation

014513-014530-0304



E. TOWNSMAN

GENERAL

the

RECEIVERS:—Have they been made under survey

Yes

State No. of Report or Certificate

11416

11416

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

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 cu ft.

Internal diameter

2' 0" 8"

thickness

3/8"

15/32"

Seamless, lap welded or riveted longitudinal joint

Material

Steel

Range of tensile strength

26/30

Working pressure

by Rules

Actual

App.

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

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

1942 December 29. 1943 Mar 25. Apr 15. JUN 21. JULY 28. AUG 4, 5, 11.

8

Dates of Examination of principal parts—Cylinders

Covers

Pistons

Rods

Connecting rods

Crank shaft

Flywheel shaft

Thrust shaft

Intermediate shafts

Tube shaft

Screw shaft

14.12.42

Propeller

29-12-42

Stern tube

29-12-42

Engine seatings

25.3.43

Engines holding down bolts

21.6.43

Completion of fitting sea connections

29-12-42

Completion of pumping arrangements

4.8.43

Engines tried under working conditions

4.8.43 11.8.43

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

Identification Marks on Air Receivers

See Hull. Manchester Report No 11416

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

Hull Report No 52094

"E. LAIRD"

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

The machinery of this vessel has been constructed as per approved plans, Secretary's letters and to the Specification, of good material & 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 8, 43 OG.

Oil Engines 25. SA. 5 cyl. 10 1/2" - 13 1/2". 97 NHP.

Yorling reports retained for following vessels of same type.

The amount of Entry Fee .. £ : : When applied for, Special (Past) ... £ 8 : 1 : 34 AUG 1943 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 19

Committee's Minute

TUES. 31 AUG 1943

Assigned

W. S. Shields

Engineer Surveyor to Lloyd's Register of Shipping.



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