

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 52089.

- 8 AUG 1943

Received at London Office

5 AUG 1943

Port of

HULL

Date of writing Report

When handed in at Local Office

19

Date, First Survey

16. 12. 43.

Last Survey

5. 4. 1943

No. in Survey held at

Knottingley Goole

Number of Visits

15.

Reg. Book.

Single
on the Twin
Triple
Quadruple

Screw vessel

Motor Collier

IMPERE RANCHER

Tons { Gross 332
Net 158

Built at Knottingley Goole

By whom built John Harker Ltd.

Yard No. 147 When built 1943

Engines made at Manchester

By whom made Crossley Bros. Ltd.

Engine No. 124215 When made

Donkey Boilers made at

By whom made

Boiler No. — When made

Horse Power 275

Owners Ministry of War Transport

Port belonging to

Horse Power as per Rule 97

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted YES

Trade for which vessel is intended

Motor Collier

L 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

Mean of bearings, adjacent to the Crank, measured from inner edge to inner edge

Flywheel dia. 37 1/2"

Weight 2166 lbs.

Is there a bearing between each crank YES

Revolutions per minute 300

Crank Shaft, { Solid forged
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"

Kind of fuel used DIESEL OIL

Thickens parallel to axis

Thickens 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"

Stern Shaft, diameter as per Rule as fitted

Screw Shaft, diameter as per Rule as fitted 5"

Is the { tube { shaft fitted with a continuous liner { No.

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

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

If YES, If sp, 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 COMP. AIR (direct) is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication

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

EX. MANIFOLD WATER-COOLED

EX. PIPE LAGGED

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

Bilge Water Pumps, No. ONE ME 4 1/4" x 3"

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"

ME BILGE & COOLING PUMPS INTERCHANGEABLE

Can one be overhauled while the other is at work YES, AS

Pumps connected to the Main Bilge Line

No. and Size ONE 4 1/4" x 3"

ME CYL. COOLING PUMP SIMILAR

FOR EMERGENCY USE ONLY

ONE 2" HANWORTHY CENTRIFUGAL SELF PRIMING

HANDPUMP

How driven ME

ME

FOR EMERGENCY USE ONLY

IND. DIESEL

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 ME 4 1/4" x 3" AS ABOVE

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

2 PUMPS FORM ONE UNIT, IN SERIES SEE MCHT REP. 11304

Are two independent means arranged for circulating water through the Oil Cooler

BOTH M.E. & AUX. ENG. PUMP 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

Holds, &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

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 E.W. STL. 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

That pipes pass through the bunkers NONE

How are they protected

That pipes pass through the deep tanks

YES

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

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 1/4" & 2 1/2"

Stroke 4"

Driven by M.E.

Auxiliary Air Compressors, No. ONE

No. of stages 2

Diameters 3 1/4" & 1 1/8"

Stroke 3 1/4"

Driven by Aux. E.

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

AUX. ENG. ABOVE — HAND STARTING

Scavenging Air Pumps, No. 2 (TANDEM)

Diameter 20 1/2"

Stroke 7 3/4"

Driven by M.E.

Auxiliary Engines crank shafts, diameter as per Rule as fitted

SEE MANCHESTER RPTS. 11291/2/5

No.

Position

Have the Auxiliary Engines been constructed under special survey YES

Is a report sent herewith YES

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004387-004393-0016

"E. RANCHER"

AIR RECEIVERS:—Have they been made under survey

YES

State No. of Report or Certificate

NOTT. C 878

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

2' 0 1/8"

thickness

3/8" & 15/32"

Seamless, lap welded or riveted longitudinal joint

RIVETED &
WELDED

Material

Stl.

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

7.7.42, 8.8.42

Receivers

25.6.42

Separate Fuel Tanks

9.7.42 & 28.10.42

Donkey Boilers

YES

General Pumping Arrangements

8.10.42

Pumping Arrangements in Machinery Space

8.10.42

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

As per Specification.

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

Su Manchester Report No. 11304

1942 Dec 16, 28. 1943 Feb 19 Mar 1, 4, 25 May 6, 13, 21 Jun 1, 17, 21, 23, 24. July 5.

15

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Dates of Examination of principal parts—Cylinders

Covers

Pistons

Rods

Connecting rods

Crank shaft

24.6.43

Flywheel shaft

YES

Thrust shaft

25.3.43

Intermediate shafts

25.3.43

Tube shaft

YES

Screw shaft

28.12.42

Propeller

28.12.42

Stern tube

28.12.42

Engine seatings

4.3.43

Engines holding down bolts

25.3.43

Completion of fitting sea connections

28.12.42

Completion of pumping arrangements

24.6.43

Engines tried under working conditions

24.6.43

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

Su Manchester Report No. 11304.

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

NO

If so, state name of vessel

YES

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 & 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 7, 43 TS.06.

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

The amount of Entry Fee

£

:

:

When applied for,

Special (Part)

£

8

:

:

5 AUG 1943

Donkey Boiler Fee

£

:

:

When received,

Travelling Expenses (if any)

£

:

:

19

Committee's Minute

TUES. 17 AUG 1943

Assigned

+ LMC 7.43 09.

W S Shields

Engineer Surveyor to Lloyd's Register of Shipping.



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