

NOV 1944

## REPORT ON OIL ENGINE MACHINERY.

No 22820.

Received at London Office

176 NOV 1944

Date of writing Report

4<sup>th</sup> Nov. 1944

When handed in at Local Office

10<sup>th</sup> Nov. 1944

Port of GREENOCK

No. in Survey held at  
Reg. Book.

GREENOCK

Date, First Survey

30<sup>th</sup> APRIL 1943

Last Survey

3 Nov 1944

Number of Visits 69

on the ~~Triple~~ <sup>Single</sup> Screw vessel"EMPIRE RAWLINSON"Tons Gross 9912.16  
Net 7002.75

Built at PORT GLASGOW

By whom built LITHGOWS LTD

Yard No. 994 When built 1944

Engines made at GREENOCK

By whom made JOHN G. KINCAID &amp; CO LTD

Engine No. 1155 When made 1944

Donkey Boilers made at ANNAN

By whom made COCHRAN &amp; CO LTD

Boiler No. 1567 When made

Indicated Horse Power 6800

Owners M. O. W. T.

Port belonging to

Nom. Horse Power as per Rule 1231

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted YES

Trade for which vessel is intended

OPEN SEA SERVICE

L ENGINES, &amp;c. Type of Engines

Diesel airless injection 2 or 4 stroke cycle 2 Single or double acting double

Maximum pressure in cylinders

700 lbs/sq. in.

Mean Indicated Pressure

6.56 lbs/sq. in.

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

116 1/2

Is there a bearing between each crank Yes

Revolutions per minute

116

Flywheel dia.

2482.87

Weight

2500 kg

Means of ignition Compression

Kind of fuel used

Heavy oil

Crank Shaft, {  
Solid forged  
Semi built  
All built

dia. of journals

as per Rule 485 1/2

as fitted 485 1/2

Crank pin dia.

485 1/2

Crank Webs

Mid. length breadth 1040 1/2

Thick. parallel to axis 250

Thick. around eyehole 272.5

Flywheel Shaft, diameter

as per Rule 115

as fitted 115

Intermediate Shafts, diameter

as per Rule 15.79

as fitted 15.79

Thrust Shaft, diameter at collars

as per Rule 16.58

as fitted 16.58

Main Shaft, diameter

as per Rule 17.29

as fitted 17.29

Screw Shaft, diameter

as per Rule 17.75

as fitted 17.75

Is the shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes

as per Rule .829

as fitted .875

Thickness between bushes

as per Rule .622

as fitted .75

Is the after end of the liner made watertight in the

Propeller boss Yes

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

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 5'-10"

Propeller, dia.

18'-0"

Pitch 13'-11 1/4"

No. of blades 4

Material MB

Whether Moveable No

Total Developed Surface 121

sq. feet

Method of reversing Engines Air ram

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

Means of lubrication

Thickness of cylinder liners 42 1/2

Are the cylinders fitted with safety valves Yes

Are the exhaust pipes and silencers water cooled or lagged with

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

Cooling Water Pumps, No. Four 2 Main 1 F.W. 1 S.W.

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. None

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

One 250 ton/hr.

Two 135 ton/hr. ea.

How driven

Electric motors

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 250 ton/hr.

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

Two @ 350 ton/hr.

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

Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

4 @ 3 1/2"

4 @ 2 1/2"

1 @ 5" tunnel

1.2" tunnel well

In Pump Room

In Holds, &amp;c.

4 @ 3"

4 @ 3 1/2"

No 1 - 2 at 3

No 3 - 2 at 3 1/2

No 6 - 2 at 3

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Two @ 5 1/2"

One @ 8"

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

Yes

Are the Bilge Suctions in the Machinery Spaces

Is it 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

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 Below

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 Yes

Do any pipes pass through the bunkers

None

How are they protected

Do any 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

Yes

Is it fitted with a watertight door

No

worked from Accom from J.O.K.

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.

Two

No. of stages

Two

Diameters

Stroke

140 cu ft/min

Driven by 2 Motor

Auxiliary Air Compressors, No.

One

No. of stages

One

Diameters

Stroke

8-10 cu ft/min

Driven by

2 Motor

Small Auxiliary Air Compressors, No.

One

No. of stages

One

Diameters

Stroke

8-10 cu ft/min

Driven by

2 Motor

What provision is made for first Charging the Air Receivers

Emergency compressor

Savenging Air Pumps, No.

One

Diameter

Stroke

Driven by

2 Motor

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No.

Three

Position

ER Vertical

Have the Auxiliary Engines been constructed under special survey

Yes

Is a report sent herewith

Yes

London N° 11573

MANCHESTER N° 11592

007722 007730 0076



AIR RECEIVERS: - Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule  
Can the internal surfaces of the receivers be examined and cleaned

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

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

IS A DONKEY BOILER FITTED?

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

If so, is a report now forwarded?

PLANS.

Are approved plans forwarded herewith for Shafting

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,  
For JOHN G. KINCAID & CO. LIMITED.

Director.

Manufacturer.

Dates of Survey while building  
During progress of work in shops - (1943) APRIL 30, JUNE 11, JULY 16, OCT. 29, NOV. 1, 17, 24, 26, 29, DEC. 1, 16 (1944) JAN 5, 14, 18, 21, 25, FEB. 1, 21, 23, MAR. 6, 23, MAY 23, 24, 29, 30.  
During erection on board vessel - JUNE 5, 6, 8, 9, 12, 13, 14, 16, 19, 20, 22, 26, 30, JULY 10, 12, 13, 19, 22, 26, 28, AUG. 1, 8, 9, 17, 21, 22, 24, 28, 29, SEPT. 8, 14, 15, 22, 29, OCT. 2, 4, 6, 8, 9, 10, 18, 24, 25, NOV. 3.  
Total No. of visits 69.

Dates of Examination of principal parts - Cylinders 25/1/44 Covers 25/1/44 Pistons 25-1-44 Rods 24-5-44 Connecting rods 24-5-44

Crank shaft 24-5-44 Flywheel shaft 17/11/43 Thrust shaft 5/6/44 Intermediate shafts 5/6/44 Tube shaft 15/9/44

Screw shaft 24/10/44 Propeller 29/5/44 Stern tube 21/2/44 Engine sealings 26/6/44 Engines holding down bolts 15/9/44

Completion of fitting sea connections 20/6/44 Completion of pumping arrangements 4/10/44 Engines tried under working conditions 4/10/44

Crank shaft, Material SMS Identification Mark 2912228 CMH Flywheel shaft, Material Identification Mark

Thrust shaft, Material SMS Identification Mark 19 12062 CMH Intermediate shafts, Material SMS Identification Mark 2912228 CMH

Tube shaft, Material Identification Mark Screw shaft, Material SMS Identification Mark BC F9411 H 10/10/44

Identification Marks on Air Receivers  
N° 2381  
110405 TEST  
5854/1<sup>a</sup>  
W.P. 3554/1<sup>a</sup>  
CMH 19-6-44

Is the flash point of the oil to be used over 150° F. 44

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with 44

Description of fire extinguishing apparatus fitted 2-30 gln & 6-2 gln portable "Phonem" Two 50 lb CO<sub>2</sub> bottles {connect scavange

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 No If so, state name of vessel

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

The machinery of this vessel has been built under special survey in accordance with the Rules & approved plans. The M.O.W.T. Specification & plans have been supervised. The materials & workmanship are sound & good.

The machinery has been efficiently installed in the vessel & tested out under full working conditions with satisfactory results and is eligible in my opinion to be classed in the Society's Register Book with record

LMC: 11-44 and notation Screw shaft CL. 10B/105 lbs/1<sup>a</sup>

Forging certificates common to this vessel & 156 to follow will be forwarded on completion of the latter.

The amount of Entry Fee .. £ 6 : 0 :  
Special ... £ 130 : 15 : 6  
Donkey Boiler Fee ... £ 32 : 14 : 0  
AIR RECEIVER (4-4-25) 5 : 5 :  
Travelling Expenses (if any) £ : :  
When applied for, 10<sup>th</sup> Nov. 1944.  
When received, 19.

Committee's Minute

Assigned - Linc 11.44

10B 105 lb.

Charles J. Hunter

Engineer Surveyor to Lloyd's Register of Shipping.



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