

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 8395
-8 AUG 1935

Date of writing Report

1.8.35

10

When handed in at Local Office

7.8.35

Port of

Received at London Office

MANCHESTER

No. in Survey held at

MANCHESTER

Reg. Book.

Date, First Survey

15 Febry

Last Survey

24 July 1935

Number of Visits

9

on the ~~Single~~
~~Twin~~
~~Triple~~
~~Quadruple~~
Screw vessel

LUNEVALE

Built at

Northwich

By whom built

W. J. Jarwood & Sons Ltd

Engines made at

Manchester

By whom made

Crossley Bros. Ltd

Donkey Boilers made at

✓

By whom made

✓

Brake Horse Power

150

Owners

Nom. Horse Power as per Rule

51.6

Is Refrigerating Machinery fitted for cargo purposes

Boiler No.

When made

1935

Port belonging to

Is Electric Light fitted

Trade for which vessel is intended

L ENGINES, &c.—Type of Engines Vertical airless injection

Maximum pressure in cylinders

700 lbs

Diameter of cylinders

7"

Length of stroke

9 9/16"

2 or 4 stroke cycle

2 Single or double acting

Single

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

9 9/16"

No. of cylinders

3

No. of cranks

3

Revolutions per minute

450

Flywheel dia.

27"

Weight

576 lbs

Means of ignition Compression

Kind of fuel used

Heavy Oil

Crank Shaft, dia. of journals

as per Rule approved

Crank pin dia.

4 1/2"

Crank Webs

Mid. length breadth

6 1/8"

Is there a bearing between each crank

each engine

yes

Flywheel Shaft, diameter

as per Rule

Intermediate Shafts, diameter

as per Rule

Thrust Shaft, diameter at collars

as per Rule approved

3 1/4"

Tube Shaft, diameter

as per Rule

Screw Shaft, diameter

as per Rule

Is the tube shaft fitted with a continuous 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

If so, state type

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

Propeller, dia.

Pitch

No. of blades

Material

Whether Moveable

Length of Bearing in Stern Bush

next to and supporting propeller

Method of reversing Engines

Direct

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

Exhaust

Thickness of cylinder liners

1 1/2" to 1 3/4"

Are the cylinders fitted with safety valves

yes

Are the exhaust pipes and silencers water cooled

on lagged with

Cooling Water Pumps, No.

One each engine

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps

worked from the Main Engines, No.

2

Diameter

2 1/2"

Stroke

2 1/4"

Can one be overhauled while the other is at work

yes

Pumps connected to the Main Bilge Line

No. and size

1. Self priming centrifugal type

19 Tons capacity main port tank

Ballast Pumps, No. and size

No. and size

1. Self priming centrifugal type

19 Tons capacity main port tank

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

No. and size

1. Self priming centrifugal type

19 Tons capacity main port tank

Oil Cooler

No. and size

1. Self priming centrifugal type

19 Tons capacity main port tank

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size

1. Self priming centrifugal type

19 Tons capacity main port tank

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

No. and size

1. Self priming centrifugal type

19 Tons capacity main port tank

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

Are the Bilge Suctions in the Machinery Spaces

Are they fitted with Valves or Cocks

Are the Overboard Discharges above or below the deep water line

Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Have they been tested as per Rule

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Do the pipes pass through the bunkers

Do the pipes pass through the deep tanks

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

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

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 each engine

No. of stages

One

Diameters

3 1/2"

Stroke

2 1/4"

Driven by

Main engines

Auxiliary Air Compressors, No.

One only

No. of stages

2

Diameters

3 1/4" & 1 1/4"

Stroke

3"

Driven by

Aux. Diesel engine

Small Auxiliary Air Compressors, No.

✓

No. of stages

✓

Diameters

✓

Stroke

✓

Driven by

✓

Suctioning Air Pumps, No.

One each engine

Diameter

13 1/4"

Stroke

7"

Driven by

Main engine

Auxiliary Engines crank shafts, diameter

as per Rule approved

PIN 2 3/8" dia

Journal 3 1/4" dia

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

Are the internal surfaces of the receivers be examined

Is there a drain arrangement fitted at the lowest part of each receiver

What means are provided for cleaning their inner surfaces

High Pressure Air Receivers, No.

No.

Cubic capacity of each

Internal diameter

thickness

Are they welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Low Pressure Air Receivers, No.

4.

Total cubic capacity

5 cu. ft.

Internal diameter

15 6"

thickness

5 1/16"

Are they welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

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Lloyd's Register

actual 3500 lb

W1319-0164

IS A DONKEY BOILER FITTED? ☒

If so, is a report now forwarded? ☒

PLANS. Are approved plans forwarded herewith for Shafting ☒ (If not, state date of approval)

Receivers ☒

Separate Tanks ☒

Donkey Boilers ☒

General Pumping Arrangements ☒

Oil Fuel Burning Arrangements ☒

SPARE GEAR FITTED AS REQUIRED BY THE RULES. ☒

PRINCIPAL ADDITIONAL SPARE GEAR SUPPLIED.

1. Fuel pump complete. 1 Cylinder head (with valves & springs complete).
1. Piston complete with rings & pin. 1. Crankshaft Gear wheel.
4. Bolts and nuts & nuts. 1. Water pump complete. 1 Set Spray pipe
Assorted bolts & nuts.

The foregoing is a correct description,

W. D. Bant

Manufacturer.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel --
Total No. of visits

1935 Feb 15 Mar 15 Apr 9 June 13 26 July 2. 15. 22. 24

Dates of Examination of principal parts—Cylinders 21. 5. 35 Covers 21. 5. 35 Pistons 26. 6. 35 Rods 15. 2. 27
Connecting rods 15. 2. 27
Crank shaft 9. 4. 35 Flywheel shaft 15. 3. 35 Thrust shaft 15. 3. 35 Intermediate shafts None Tube shaft None
Screw shaft 15. 3. 35 Propeller 15. 3. 35 Stern tube 15. 3. 35 Engine seatings 15. 3. 35 Engines holding down bolts 15. 3. 35
Completion of fitting sea connections 15. 3. 35 Completion of pumping arrangements 15. 3. 35 Engines tried under working conditions 15. 3. 35
Crank shaft, Material M. STEEL Identification Mark 653P+654S. Flywheel shaft, Material 15. 3. 35 Identification Mark 15. 3. 35
Thrust shaft, Material M. STEEL Identification Mark 644P+5. Intermediate shafts, Material None Identification Marks 15. 3. 35
Tube shaft, Material 15. 3. 35 Identification Mark 15. 3. 35 Screw shaft, Material 15. 3. 35 Identification Mark 15. 3. 35

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

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

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 ☒

Is this machinery duplicate of a previous case ☒

If so, state name of vessel

Severn Ferry (Exapt. Aux. Equip)

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

These propelling engines (14000 Gross

Bro. Sta Type DR3) have been built under special survey of tested materials and are in accordance with Secretary's letters, approved plans and the Society's and Regulations.

The material and workmanship are of good quality and the engines when tested in shop under full load conditions gave satisfactory results.

These engines are, in our opinion, suitable to be placed on board vessel classed with this Society and to have the notation of +LMC with date when satisfactorily fitted on board.

An auxiliary engine type BVD1. No. 119031 has been constructed in accordance with London Letter E dated May 9th 1935. This engine is directly coupled to a Reavell 2 air compressor No. 40503. It has been constructed under survey of tested material examined once & found satisfactory. In our opinion this engine is suitable for the purpose intended & has been dispatched to Northwich with the main engines.

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for,
4/5 Special ... £ 10 : 6 : 0 7. 8. 1935
Donkey Boiler Fee ... £ : : : When received,
Travelling Expenses (if any) £ : 9 : 0 4. 10. 1935

W. A. Black & J. M. Munt
Engineers, Surveyors to Lloyd's Register of Shipping

Committee's Minute

Assigned