

Rpt. 4b.

DIESEL ELECTRIC
REPORT ON ~~OIL ENGINE~~ MACHINERY.

No. 77102

11 JUN 1951

Date of writing Report 29.5.1951

When handed in at Local Office 29.5.1951

Received at London Office

Port of GLASGOW

No. in Survey held at DUMBARTON

Date, First Survey 31/10/50

Last Survey 24/4/1951

Reg. Book.

Number of Visits 52.

95754

on the Twin

Screw vessel.

"ROYAL IRIS"

Gross 1234.03

Tons

Net 622.28

Built at DUMBARTON

By whom built WM DUNN & BROS., LTD.

Yard No. 1448

When built 4/1951

Engines made at LINCOLN

By whom made RUSTON & HORNSBY LTD.

Engine No. 284611-284614

When made 4/1951

Propulsion Motors - MANCHESTER

By whom made METROPOLITAN-VICKERS ELECTRICAL CO. LTD.

Boiler No. 18843

When made 4/1951

Boilers made at ALBAN

By whom made COCHRAN & CO. ALBAN, LTD.

Boiler No. 18843

When made 4/1951

Horse Power 1460

Owners WALLASEY CORPORATION

Port belonging to LIVERPOOL

M.N. Power as per Rule 271 NHP = 246

Is Refrigerating Machinery fitted for cargo purposes. No

Is Electric Light fitted. YES

Trade for which vessel is intended. FOR FERRY SERVICE ON THE RIVER MERSEY.

OIL ENGINES, &c. (4 ENGINES) RUSTON & HORNSBY 6VEBXZ

2 or 4 stroke cycle 4

Single or double acting S.A.

Maximum pressure in cylinders 735 lbs/sq. in.

Diameter of cylinders 10 1/4"

Length of stroke 14 1/2"

No. of cylinders 4x6

No. of cranks

Mean Indicated Pressure 99.5 lbs/sq. in.

Ahead Firing Order in Cylinders

Span of bearings, adjacent to the crank, measured

from inner edge to inner edge.

Is there a bearing between each crank.

Revolutions per minute 215

Flywheel dia.

Weight

Moment of inertia of flywheel (lb. in.² or Kg. cm.²)

Means of ignition

Kind of fuel used

Crank Shaft, Solid forged

Semi built

All built

dia. of journals

as per Rule

as fitted

Crank pin dia.

Crank webs

Mid. length breadth

Mid. length thickness

Thrust parallel to axis

Thrust around eye hole

Flywheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

Is the screw shaft fitted with a continuous liner

No

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

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.

If so, state type UNITED STATES PACKING GLAND

Length of bearing in Stern Bush next to and supporting propeller 3'-0 5/8"

Propeller, dia. 7'-0"

Pitch 8'-3" MAX

No. of blades 3

Material MANGANESE

whether moveable No

Total developed surface 10.5 sq. feet

Moment of inertia of propeller (lb. in.² or Kg. cm.²) 0.833 Tons Ft Secs

Method of reversing Engines Non-Reverse

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

lubrication FORCED

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water-cooled

lagged with non-conducting material YES

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. 3

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

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 2 G.S. & 1 BILGE PUMP EACH OF 35 TONS CAPACITY.

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 NONE

Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 EACH ENGINE (8 IN ALL)

Are two independent means arranged for circulating water through the Oil Coolers NO

Suctions, connected to both main bilge pumps and auxiliary

bilge pumps, No. and size: In machinery spaces 3 x 2 1/2"

In holds, &c. CREWS MESS FORD. 1 x 2". FORD. SPACE BELOW SMOKE ROOM 2 x 2". WATERTIGHT COMP. Aft 1 x 2".

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 3 x 2 1/2"

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes.

YES

Are the bilge suction pipes 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

Are they fitted with valves or cocks.

YES

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.

YES

What pipes pass through the bunkers.

MAID ENGINE & COOLER CIRCULATING

WATER DISCHARGES OVERBOARD

How are they protected.

STEEL PIPES

What pipes pass through the deep tanks.

YES

Have they been tested as per Rule.

YES

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.

NONE

Is it fitted with a watertight door.

worked from.

Main Air Compressors, No. ONE

No. of stages TWO

diameters

stroke

driven by ELECT. MOTOR

Auxiliary Air Compressors, No. ONE

No. of stages ONE

diameters 3 1/2"

stroke 3 1/4"

driven by DIESEL ENGINE.

Small Auxiliary Air Compressors, No.

No. of stages

diameters

stroke

driven by

What provision is made for first charging the air receivers.

AUXILIARY AIR COMPRESSOR.

Scavenging Air Pumps, No.

As APPROVED

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No. 2

Position ENG. ROOM BETWEEN INBOARD PROPULSION

Have the auxiliary engines been constructed under special survey.

YES

Is a report sent herewith.

YES

DIESEL GENERATORS.

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