

# REPORT ON OIL ENGINE MACHINERY.

No 33423

29 JUN 1942

Received at London Office

2938 pt. 4b.

Date of writing Report

When handed in at Local Office 26 JUN 1942 Port of

Sunderland.

No. in Survey held at

Sunderland.

Date, First Survey 15<sup>th</sup> Jan. 1942 Last Survey ?

19

Book.

Number of Visits

on the *Single* *Triple* *Quadruple* Screw vessel

ERODONA

Tons <sup>Gross</sup> <sub>Net</sub>

built at

By whom built

Yard No.

When built

engines made at

Sunderland

By whom made

Wm. Leyford & Sons Ltd.

Engine No.

225

When made

1942.

Boilers made at

By whom made

Boiler No.

When made

Indicated Horse Power 2500

Owners

Port belonging to

Net Horse Power as per Rule 516.

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

ENGINES, &c.

Type of Engines

Opposed piston, airless injection, 2 or 4 stroke cycle 2

Single or double acting

Single

Maximum pressure in cylinders

540 lbs/sq. in.

Diameter of cylinders

600 in.

Length of stroke

Upper 980 in.

No. of cylinders

3

No. of cranks

3 (3 throws)

Indicated Pressure

88 lbs/sq. in.

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

940 in.

Is there a bearing between each crank

Between each 3 throws.

Revolutions per minute

108

Flywheel dia.

2300 in.

Weight

F. 5 3/4 tons

A. 5 1/2 tons

Means of ignition

Compression

Kind of fuel used

—

Shaft, dia. of journals

as per Rule 418 in.

as fitted 450 in.

Crank pin dia.

450 in.

Crank Webs

Mid. length breadth

650 in.

Thickness parallel to axis

255 in.

Wheel Shaft, diameter

as per Rule 418 in.

as fitted 450 in.

Intermediate Shafts, diameter

as per Rule

fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted 418 in.

450 in.

Propeller Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the tube

screw

shaft fitted with a continuous liner

{

Brass 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

—

Does 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

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—

Are two liners are fitted, is the shaft lapped or protected between the liners

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

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—

Length of Bearing in Stern Bush next to and supporting propeller

—

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—

Propeller, dia.

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

sq. feet

—

—

—

Method of reversing Engines

Hand lever

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

when decelerated

Yes.

Means of lubrication

—

—

—

—

Thickness of cylinder liners

25 in.

Are the cylinders fitted with safety valves

Yes.

Are the exhaust pipes and silencers water cooled or lagged with

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

one engine down.

—

Rolling Water Pumps, No.

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

—

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—

Engines 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

How driven

—

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—

Does the cooling water led to the bilges

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Are special arrangements made to deal with this water in addition to the ordinary bilge pumping arrangements

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Number of Oil Pumps, No. and size

one engine down 85 in. x 610 in.

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

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

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Number of Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces

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Number of Holds, &c.

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

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

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Are the Bilge Suctions in the Machinery Spaces

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Are all Sea Connections fitted direct on the skin of the ship

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Are they fitted with Valves or Cocks

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Are the Overboard Discharges above or below the deep water line

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AIR RECEIVERS: - Have they been made under survey

State No. of Report or Certificate

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

Is a drain fitted at the lowest part of each receiver

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

Actual

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

Actual

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

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

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

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

Yes (except for bearings for top & bottom ends of conn. rods).

State the principal additional spare gear supplied

The foregoing is a correct description, WILLIAM DOXFORD & SONS, Limited.

W. Keller

Director, Manufacturer.

Dates of Survey while building: During progress of work in shops - 1942 Jan. 15, 16, 19, 20, 28, 29, 30. Feb. 9, 13. Mar. 18, 29, 30, 31. Apr. 1, 2, 3, 9, 10, 15, 20, 21, 22, 23, 24, 28. During erection on board vessel - 30. May 1, 4, 5, 6, 8, 11, 12, 13, 14, 15 = 37. Total No. of visits

Dates of Examination of principal parts - Cylinders 30/3/42, 31/3/42 - Covers - Pistons 18/3/42 Rods 18/3/42 Connecting rods 23/4/42 Crank shaft 28/4/42 Flywheel shaft as crank 1/4/32 Thrust shaft as crank Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube Engines sealings Engines holding down bolts

Completion of filling sea connections Completion of pumping arrangements Engines tried ON TEST BED 15/5/42

Crank shaft, Material Inpa Steel Identification Mark N° 225 WHP 28/4/42 Flywheel shaft, Material as crank Identification Mark as crank.

Thrust shaft, Material as crank Identification Mark as crank. Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Identification Marks on Air Receivers

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

Description of fire extinguishing apparatus fitted

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 (Standard book)

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built Under Special Survey in accordance with the approved Plans, Specifications & the rules of the Society. The materials & workmanship are first class. On completion the engine has been tried under full load conditions on the test bed with satisfactory results.

This machinery has been set aside as a stock engine & stored at the works of Messrs J. Dickinson & Sons Ltd. awaiting allocation to a vessel for installation. Upon the satisfactory completion of Survey would, in my opinion, be eligible to have notation of L.R. (with oil eng. This machinery has now been installed (See later Report).)

The amount of Entry Fee £ 6 : : When applied for, 2 6 JUN 1942  
2/3 Special Specification £ 64 : 4 : :  
2/3 Donkey Boiler Fee £ 16 : 16 : :  
Welded Boilers £ 12 : 12 : :  
Travelling Expenses (if any) £ : : : :  
TUES. 28 MAR 1944

John F. Malay  
NEWCASTLE-ON-TYNE  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See NWC 10185



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Lloyd's Register Foundation

Certificate (if required) to be sent to SUNDERLAND.

(The Surveyor are requested not to write on or before the space for Committee's Minute.)