

2938  
Sept. 4b.

NEWCASTLE-ON-TYNE, No 101898

# REPORT ON OIL ENGINE MACHINERY.

No 33423

Received at London Office

29 JUN 1942

Date of writing Report

19

When handed in at Local Office

26 JUN 1942

Port of

Sunderland.

No. in Survey held at

Date, First Survey

15<sup>th</sup> Jan. 1942

Last Survey

19

Book.

Number of Visits

Single  
on the Tug  
Triple  
Quadruple

Screw vessel

ERODONA

Tons  
Gross  
Net

built at

By whom built

Yard No.

When built

engines made at

By whom made

Wm. Leifson & 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 lb/sq. in.* Diameter of cylinders *600 in.* Length of stroke *46 in.* No. of cylinders *3* No. of cranks *3 (3 throws)*  
Indicated Pressure *88 lb/sq. in.* *Upper 980 lb/sq. in.* *Lower 1340 lb/sq. in.* Between each 3 throws.  
No. of bearings, adjacent to the Crank, measured from inner edge to inner edge *940 in.* Is there a bearing between each crank  
Revolutions per minute *108* Flywheel dia. *F. 2300 in.* Weight *F. 5 1/4 tons* Means of ignition *Compression* Kind of fuel used *—*  
Crank Shaft, { *Semi built* dia. of journals *as per Rule* *418 in.* Crank pin dia. *450 in.* Mid. length breadth *650 in.* Thickness parallel to axis *255 in.*  
{ *As built* *as fitted* *450 in.* Crank Webs Mid. length thickness *255 in.* Thickness around eye hole *200 in.*  
Wheel Shaft, diameter *as per Rule* *418 in.* Intermediate Shafts, diameter *as per Rule* Thrust Shaft, diameter at collars *as per Rule* *418 in.*  
{ *as fitted* *450 in.* { *as fitted* *450 in.*

Tube Shaft, diameter *as per Rule* *as fitted* Screw Shaft, diameter *as per Rule* *as fitted* Is the tube shaft fitted with a continuous liner  
Copper 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 so, state type Length of Bearing in Stern Bush next to and supporting propeller

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 detached* *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  
Cooling Water Pumps, No. *one engine driven* Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Large 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  
{ How driven  
the cooling water led to the bilges 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 engine driven 85 in x 610 in* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size  
two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Pumps, No. and size:—In Machinery Spaces In Pump Room  
Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size  
all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes 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  
all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks  
they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line  
they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate  
How are they protected  
Have they been tested as per Rule

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times  
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  
apartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from  
wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. No. of stages Diameters Stroke Driven by  
Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by  
all Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by  
provision is made for first Charging the Air Receivers  
venting Air Pumps, No. *one* Diameter *1400 in* Stroke *610 in* Driven by *Levers from main engine.*  
Auxiliary Engines crank shafts, diameter *as per Rule* *as fitted* No. Position  
the Auxiliary Engines been constructed under special survey Is a report sent herewith



Lloyd's Register  
Foundation

002577-002582-0154



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

1/2 (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, 30  
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 - 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 Engine seatings Engines holding down bolts

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

Crank shaft, Material *Super Steel* Identification Mark *N° 225 WHP* 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 form)

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 good.*

*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 LMC (with oil Eng. This machinery has now been installed (See later Report).)*

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

Committee's Minute

Assigned

*See NWC 10185*

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



© 2021

Lloyd's Register Foundation