

REPORT ON OIL ENGINE MACHINERY.

No. 19530.

30 OCT 1935

Date of writing Report 23rd Oct. 1935.

When handed in at Local Office

29.10.1935

Port of Grimsby.

No. in Survey held at Lincoln.

Date, First Survey 15th JulyLast Survey 21st Oct. 1935.

Reg. Book.

Number of Visits 21.

Single
on the Twin
Triple
Quadruple

Screw vessel

"ELONA"

YARD N°1509

MACTRA.

YARD N°1511.

Tons { Gross 6192
Net 3630

Built at Newcastle on Tyne

By whom built Swan Hunter & Wigham

Yard No. 1511 When built 1936.

Engines made at

By whom made

Engine No. When made

Engines made at Lincoln.

By whom made Ruston & Hornsby, Ltd.

Engine Nos. 177226 for ELONA.
177227 for MACTRA.

Brake Horse Power 60 each.

Owners

Port belonging to

Nom. Horse Power as per Rule 18.6 each Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended [Two engines. Type 3VCRZ]

OIL ENGINES, &c. Type of Engines Airless injection, cold starting. 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 700 lb. Diameter of cylinders 8" Length of stroke 10 3/4" No. of cylinders 3 No. of cranks 3.

Mean Indicated Pressure 81.5 lb.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 9 1/8"

Is there a bearing between each crank

Revolutions per minute 450 Flywheel dia. 3'-4" Weight 19 cwt Means of ignition Compression Kind of fuel used Crude oil.

Crank Shaft, dia. of journals as approved. 6" Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis shrunk Thickness around eyehole

Flywheel Shaft, diameter as approved. 6" Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

Tube 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

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

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

forced. Thickness of cylinder liners 3/4" Are the cylinders fitted with safety valves yes. Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material water 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size How driven

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

Are 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

In Holds, &c.

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

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

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are 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

Are 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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks 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

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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted



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Original with
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(Sister Ship)

005769-005777-0156 1/2

IR RECEIVERS:—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 ✓

High Pressure Air Receivers, No. *None*

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. *None*

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 11/11/32

(If not, state date of approval)

Receivers ✓

Separate Tanks ✓

Donkey Boilers ✓

General Pumping Arrangements ✓

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* ✓

State the principal additional spare gear supplied ✓

The foregoing is a correct description,

J. B. Coysch 25/10/32 Manufacturer.

Dates of Survey while building
During progress of work in shops-- 1935 July 15-23 Aug 8-20 22-28 29 Sep 2-5-9-12-16-19-23-26 Oct 3-10-11-15-16-21
During erection on board vessel--
Total No. of visits 21

Dates of Examination of principal parts—Cylinders 19.9.35 Covers 23.9.35 Pistons 26.9.35 Rods ✓ Connecting rods 14.9.35

Crank shaft 19.9.35 Flywheel shaft 19.9.35 Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓

Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine sealings ✓ Engines holding down bolts ✓

Completion of fitting sea connections ✓ Completion of pumping arrangements ✓ Engines tried under working conditions 15.10.35

Crank shaft, Material *Sm. Steel* Identification Mark 3226C+D Flywheel shaft, Material *Sm. Steel* Identification Mark 3226C+D

Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material ✓ Identification Marks ✓

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

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 ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓ *Eximoby report No 18653 7/10 Inchange*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *Same type. now 3 instead of 5 cylinders.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The workmanship & materials are good.*)

The engines have been built under Special Survey in accordance with the Rules & Approved plans.

Trials were carried out at the makers' works under brake load & all found satisfactory.

The engines are being sent to Newcastle-on-Tyne, to the order of Messrs Peter Brotherhood & Co. & are to be fitted on board a vessel being built by Messrs Swan Hunter & Wigham Richardson & Co.

Auxiliary Engine No 177227. has been fitted on motor ship ELONA. yard No 1509

Auxiliary Engine No 177226. has been fitted on motor ship "MACTRA." yard No 1511.

3/2/36. *Adair*
Newcastle-on-Tyne

The amount of Entry Fee .. £
Special £
Donkey Boiler £
Travelling Expenses (if any) .. £
When applied for, 19
When received, 19

Committee's Minute

Assigned

H. L. Pidditch.
Engineer Surveyor to Lloyd's Register of Shipping.



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Original with S/s Elona
(Sister ship)

0156 1/2



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