

No. 93417

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 19530.

30 OCT 1935

Received at London Office

Date of writing Report 23rd Oct. 1935 When handed in at Local Office 29. 10. 1935 Port of Grimsey.
Date, First Survey 15th July Last Survey 21st Oct. 1935.
Number of Visits 21

No. in Survey held at Lincoln.
Reg. Book. Single on the 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. 1509 When built 1936
Engines made at Lincoln. By whom made Ruston & Hornsby, Ltd. Engine No. 177226 When made 1935
By whom made ELONA. Engine No. 177227 When made 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. Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis
as fitted 6" Mid. length thickness 2 1/2" Thickness around eyehole

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

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner
as fitted as fitted

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
as fitted as fitted

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



Original with
Sp. Stone
(Sister Ship)

005769-005777-0156 1/2

AIR 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 11/16/32. Receivers ✓ Separate Tanks ✓
(If not, state date of approval)

Donkey Boilers ✓ General Pumping Arrangements ✓ Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied 400 ✓

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 3-10-11-15-16-27
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 filling 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 7/16 Inchange same type, now 3 instead of 5 cylinders.*

Is this machinery duplicate of a previous case *Yes.* If so, state name of vessel

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. to be fitted on board a vessel being built by Messrs Swan Hunter & Wigham Richardson & Co.

Auxiliary Engine No 177227, has been fitted on motorship ELONA, yard No 1509

Auxiliary Engine No 177226, has been fitted in motorship "MACTRA", yard No 1511.

3/2/36 *Audath*
Newcastle-on-Tyne

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

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

Committee's Minute

Assigned



Original with *S/S Elona*
(Sister ship)

MS 2/2



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