

REPORT ON OIL ENGINE MACHINERY.

No. 93536

-9 MAR 1936

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report

19

When handed in at Local Office

6/3/36 Port of

No. in Survey held at
Reg. Book.

Newcastle on Tyne

Date, First Survey

27 Aug/35

Last Survey

5th Mar. 1936.

Number of Visits

64

6193

Single
on the Twin
Triple
Quadruple

Screw vessel

MACTRA

Tons

Gross

5267

Net

3627

Built at Newcastle (WallSEND) By whom built Swan Hunter & Wigham Richardson Ltd Yard No. 1511 When built 1936-3

Engines made at do (St Peters) By whom made R W Hawthorn Leslie & Co Ltd Engine No. 3852 When made 1936

Donkey Boilers made at do (Walker) By whom made Swan Hunter & Wigham Richardson Ltd Boiler No. 1488 When made 1936

Brake Horse Power 2800 Owners Anglo Saxon Petroleum Co Ltd Port belonging to LONDON

Nom. Horse Power as per Rule 377 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Workshop Supercharged 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute Flywheel dia. BY Weight Means of ignition Kind of fuel used

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eyehole

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

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 Yes

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 Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length

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 Light fit

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

Propeller, dia. 14'-9" Pitch 11'-0" No. of blades 4 Material MANG. BRZE whether Moveable No Total Developed Surface 75 sq. feet

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Led up funnel

Cooling Water Pumps, No. 2 Piston cooling, one Working & one Spare Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

What special arrangements are made for dealing with cooling water if discharged into bilges Led overboard

Bilge Pumps worked from the Main Engines, No. 2 Diameter Rotary Stroke 35 tons/hr Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size 2 - 35 tons/hr, Gen. Service 8x8x10" Steam 100 tons/hr

Ballast Pumps, No. and size 2 - 35 tons/hr, 6x6x6 Dup. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 - 8x8x10" Steam 50 tons/hr

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 1-3 1/2" aft well; 1 on p + 1 on S. by ER each 3 1/2"; 2 on a Cofferdam 2" each In Pump Room 1-2"

In Holds, &c. In Fore Hold, 2 @ 2 1/2"; In Fore Store 2 @ 2"; In Pump Room 1 @ 2"; In Fore Cofferdam 1 @ 4"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-5" direct to G. Serv. P.; 1-6 1/4" direct to Cooler Pump.

Are all the Bilge Suction pipes in Holds (incl. Pantry) fitted with strum-boxes Yes 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 Yes

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

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 4" to aft Cofferdam How are they protected Have they been tested as per Rule

What pipes pass through the deep tanks 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

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. Airless injn No. of stages 2 Diameters 4 1/2" & 8 1/2" Stroke 6 1/4 Driven by one by oil eng. one by steam injn

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 4 1/2" & 8 1/2" Stroke 6 1/4 Driven by one by oil eng. one by steam injn

Small Auxiliary Air Compressors, No. No. of stages 2 Diameters 4 1/2" & 8 1/2" Stroke 6 1/4 Driven by one by oil eng. one by steam injn

Scavenging Air Pumps, No. Diameter Stroke Driven by one by oil eng. one by steam injn

Auxiliary Engines crank shafts, diameter as per Rule as fitted See Greenish Rpt No 19530. for Ruston Hornsby 3 cyl oil eng. No 177226 on Starboard side of ER. 16 KW. Single Cyl. V. CRANK SHAFT on Starboard side of ER

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. Airless injn 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. two (each 400) = 800 cu ft Internal diameter 540" thickness 27/32"

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 29 to 33 tons Working pressure by Rules Actual

005769-005771-0153

IS A DONKEY BOILER FITTED? *Yes.*

If so, is a report now forwarded? *Yes.*

Is the donkey boiler intended to be used for domestic purposes only *No*

PLANS. Are approved plans forwarded herewith for Shafting *17/4/35 + 16/5/35*

Receivers *17/9/35*

Separate Tanks *14/10/35*

Donkey Boilers *21/6/35*

General Pumping Arrangements *17/9/35*

Oil Fuel Burning Arrangements *✓*

SPARE GEAR.

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

State the principal additional spare gear supplied *See Rpt on main Engines.*

The foregoing is a correct description.

G. J. Shewdy
DIRECTOR.

Manufacturer.

1935 *See Separate report for visits during progress in shops.*
Dates of Survey while building: During progress of work in shops - Aug. 27, 30, Sep. 3, 6, 10, 11, 17, 23, 24, 27, Oct. 7, 8, 11, 16, 17, 18, 25, 29, Nov. 4, 6, 12, 13, 15, 18, 20, 26, 29, Dec. 2, 3
During erection on board vessel - 5, 6, 10, 11, 12, 16, 18, 19, 24, 27, 30, 31, 1936 Jan. 8, 13, 16, 21, 23, 27, 30, Feb. 3, 5, 6, 7, 11, 13, 14, 19, 21, 25, 26, 27, Mar. 2, 5.
Total No. of visits *64 + 37 in shops = 101.*

Dates of Examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *30/1/36* Tube shaft *✓*
Screw shaft *12-11-35* Propeller *12-11-35* Stern tube *6/12/35* Engine seatings *30/1/36* Engines holding down bolts *30/1/36*
Completion of fitting sea connections *18/12/35* Completion of pumping arrangements *25/2/36* Engines tried under working conditions *27/2/36 + 5/3/36.*
Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *✓*
Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *SM Steel* Identification Marks *11668 MB.*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *SM Steel* Identification Marks *working 11313 MB. spare 11314 M.B.*

Is the flash point of the oil to be used over 150° F. *Yes*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes*

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 *Yes* If so, state name of vessel *M.S. ELONA. New Rpt No 93417.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under special survey in accordance with the Society's Rules and approved plans. The materials and workmanship are good.

The machinery has been satisfactorily installed on board the vessel and tested under working conditions, and the vessel is eligible in my opinion for record + LMC 3.36 and notation TS. CL.

certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee *See Separate Rpt.* When applied for, *7 MAR 1936*
Special *1/5th* ... £ 16: 6: When received, *11.3 1936 12/3*
Donkey Boiler Fee £ 17: 2:
Two Starting Air Recs £ 8: 8:
Travelling Expenses (if any) £

Committee's Minute

Assigned

See other JG New 93536

A. Watt

Engineer Surveyor to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation