

## REPORT ON OIL ENGINE MACHINERY.

No. 94319  
23 OCT 1936

Date of writing Report

19

When handed in at Local Office

21.10.36 Port of

Received at London Office

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Newcastle

Date, First Survey

9 March

Last Survey

21 Oct 1936

Number of Visits

51

Single  
on the  
Triple  
Quadruple

Screw vessel

SEPIA.

Tons  
Gross 6214  
Net 3620.

Built at Newcastle (Wallsend) By whom built Swan Hunter & Wigham Richardson & Co. Ltd. Yard No. 1519 When built 1936.  
Engines made at do (St. Peter). By whom made R. W. Hawthorn, Leslie & Co. Ltd. Engine No. 3879 When made 1936.  
Donkey Boilers made at do (Walker) By whom made Swan Hunter & Wigham Richardson & Co. Ltd. Boiler No. 1524 When made 1936.  
Brake Horse Power 2850. Owners Anglo-Saxon Petroleum Co. Ltd. Port belonging to LONDON.  
Nom. Horse Power as per Rule 387. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.  
Trade for which vessel is intended Ocean-going. Carrying Petroleum in bulk

**IL ENGINES, &c.**—Type of Engines *Worshipful Supercharged* 2 or 4 stroke cycle 4 Single or double acting *Single*  
Maximum pressure in cylinders 700 lb./sq. in. Diameter of cylinders 650 mm Length of stroke 1400 mm No. of cylinders 6 No. of cranks 6  
Mean indicated pressure 135 lb. max. *See Report on Main Engines.* Is there a bearing between each crank  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge  
Revolutions per minute Flywheel dia. Weight Means of ignition *Compression* Kind of fuel used *Diesel oil*  
Crank Shaft, dia. of journals as per Rule ✓ Crank pin dia. ✓ Crank Webs Mid. length breadth ✓ Mid. length thickness ✓ Thickness parallel to axis ✓  
Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as fitted 350 mm Thrust Shaft, diameter at collars as per Rule ✓  
Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as fitted 370 mm Is the shaft fitted with a continuous liner *Yes* ✓  
Bronze Liners, thickness in way of bushes as per Rule 22.8" = 18.2 mm Thickness between bushes as fitted 19.25 mm 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 *As 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 *Tight 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

Length of Bearing in Stern Bush next to and supporting propeller 1480 mm  
Propeller, dia. 14.9" Pitch 11.0" No. of blades 4 Material *Man. Brg.* whether Moveable *No* Total Developed Surface 75 sq. feet

Method of reversing Engines *Air Servo.* Is a governor or other arrangement fitted to prevent racing of the engine when detached *Yes* Means of lubrication  
See Report on Main Engines. 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. *Cylinder Cooling: one driven by main engine. Piston Cooling: do. do.* 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 *See m. Engine Rpt.* Can one be overhauled while the other is at work  
Pumps connected to the Main Bilge Line No. and Size 2-35 ton Rotary, Gen. Sew. Pump 8x8x10, 100 ton/hr  
How driven *by M. Engine* *Steam*

Ballast Pumps, No. and size *18x8x10; 6x6x6* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *one 40 ton. main by driven. one Standby 8x8x10. 50 ton.*  
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 of 3 1/2" after well; 2 of 3 1/2" in Eng. Rm. p.t.s; 7 of 4" Cofferdams, 2 each. In Pump Room 1 of 2"*

In Holds, &c. *In Fore Hold 2 of 2 1/2"; In Fore Store 2 of 2"; In Fore Cofferdam 1 of 4"*  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *one 5" direct to G.S.P.; 1 of 6" direct to cooler pumps.*  
Are all the Bilge Suction pipes in Holds and Tunnels fitted with strum-boxes *Yes* ✓ Are the Bilge Suctions in the Machinery Spaces

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 *oil fuel 4" & aft Cofferdam* ✓ How are they protected ✓  
What pipes pass through the deep tanks " " Have they been tested as per Rule *Yes* ✓  
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 ✓ 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 Injection of Engines.* Diameters *4 1/2" + 8 1/2"* Stroke *6 1/4"* Driven by *one by oil engine one by Steam Eng.* ✓  
Auxiliary Air Compressors, No. 2. No. of stages 2. Diameters " Stroke " Driven by " ✓  
Small Auxiliary Air Compressors, No. *None* No. of stages " Driven by " ✓  
Scavenging Air Pumps, No. *None* Diameter " Stroke " Driven by " ✓

Auxiliary Engines crank shafts, diameter as per Rule *See Grimsby Rpt 19694 (Eng. No. 178297).* No. — *one 3 G. for Compression on P. Side of ER. one Single G. for Acc. Gen. on S. side of ER.*  
as fitted *+ Amsterdam Rpt. 13737* Position *one 3 G. for Compression on P. Side of ER. one Single G. for Acc. Gen. on S. side of ER.*

**AIR RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes* ✓ Is a drain fitted at the lowest part of each receiver *Yes* ✓  
Can the internal surfaces of the receivers be examined and cleaned *Yes* ✓ Internal diameter *None* thickness *None*  
High Pressure Air Receivers, No. *Airless Inj.* Cubic capacity of each *None* Internal diameter *None* Working pressure *None*  
Seamless, lap welded or riveted longitudinal joint Material *None* Range of tensile strength *None* Actual *None*  
Starting Air Receivers, No. 2 Total cubic capacity 800 cub. ft. Internal diameter 5'-0" thickness 27/32" *by Rules 376 lb./sq. in. Actual 350 "*  
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *M. Steel* Range of tensile strength *29 to 33 tons* Working pressure *None* Actual *None*



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. - 7th Steam Auxiliaries.*

PLANS. Are approved plans forwarded herewith for Shafting *Yes* 17/4/35 + 16/5/35  
(If not, state date of approval)

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

*One C.I. Propeller & one Screw Shaft. marked 5121 J.Q. AW. 16-7-36.*

The foregoing is a correct description.

*G. F. Sweeney*

Manufacturer.

Dates of Survey while building

During progress of work in shops -  
During erection on board vessel -  
Total No. of visits

*1936*  
*Mar. 9. 27. Apr. 2. 4. 28. May 5. 8. 12. 29. June 5. 9. 10. 11. 15. 19. 29. July 2. 7. 13. 20. 21. 22. 23.*  
*28. 30. Aug. 6. 10. 12. 18. 19. 21. 28. Sep. 2. 7. 10. 15. 18. 21. 23. 24. 29. 30. Oct. 1. 6. 7. 9. 12. 16. 21.*  
*51.*

Dates of Examination of principal parts—Cylinders

*See Main Engine Report.*

Covers

Pistons

Rods

Connecting rods

Crank shaft

Flywheel shaft

Thrust shaft

Intermediate shafts

Tube shaft

Screw shaft

16-7-36

Propeller 16-7-36

Stern tube

19/8/36

Engine seatings

24/9/36

Engines holding down bolts

24/9/36

Completion of fitting sea connections

28/8/36

Completion of pumping arrangements

16-10-36

Engines tried under working conditions

21-10-36

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shaft, 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. *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

*ELONA. Nav. Rpt 93417.*  
*MACTRA Nav. Rpt. 93536.*

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

*The machinery of this vessel has been constructed and installed under special Survey in accordance with the Rules & approved plans, and the material and workmanship are good. The machinery has been satisfactorily fitted on board and tested under working conditions, and the vessel is eligible in my opinion, for record + LMC. 10. 36, Ord Eng., TS. Cl.*

The amount of Entry Fee

£ 17. 2. 0

When applied for, 19. 10. 36

Special

1/5. install

16. 6. 0

When received, 24. 10. 36

Donkey Boiler Fee

£ 8. 8. 0

Travelling Expenses (if any)

Committee's Minute

Assigned

*+ LMC 10. 36*  
*21. 180. 15*  
*Ord Eng. CH*

*A. Watt*

Engineer Surveyor to Lloyd's Register of Shipping.



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