

## REPORT ON OIL ENGINE MACHINERY.

No. 19693

34 MAR 1937

Received at London Office

Date of writing Report 1st May 1936 When handed in at Local Office 1.5.36 Port of Grimsby  
 No. in Survey held at Lincoln Date, First Survey 3rd October 1935 Last Survey 30th April 1936  
 Reg. Book. Number of Visits 25

on the Single  
Triple  
Quadruple Screw vessel

'SITALA'

Tons Gross 6218.03  
Net 3602.48

Built at Glasgow By whom built Harland & Wolff, Ltd. Yard No. 981 When built 1937  
 Engines made at Lincoln By whom made Ruston & Hornsby Ltd. Engine No. 73296 When made 1936  
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓  
 Brake Horse Power 60 Owners Anglo-Saxon Petroleum Co. Ltd. Port belonging to London  
 Nom. Horse Power as per Rule 18.6 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓  
 Trade for which vessel is intended ✓ [One Engine - Type 3 VCRZ]

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 400 lbs. Diameter of cylinders 8" ✓ Length of stroke 10 3/4" ✓ No. of cylinders 3 No. of cranks 3  
 Mean Indicated Pressure 81.5 lbs.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 9 1/8" Is there a bearing between each crank yes  
 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 ✓  
as fitted 6" Mid. length thickness 2 1/2" ✓ Thickness around eyehole ✓

Flywheel Shaft, diameter as approved 6" 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 ✓

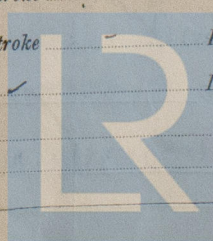
Main Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

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 ✓ No. ✓  
as fitted ✓ Position ✓



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**AIR RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ☒ Is a drain fitted at the lowest part of each receiver ☒  
Can the internal surfaces of the receivers be examined and cleaned ☒  
**High Pressure 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?** ☒

Is the donkey boiler intended to be used for domestic purposes only ☒

**PLANS.** Are approved plans forwarded herewith for Shaf'ling ☒ 7. 9. 31. Receivers ☒ Separate Fuel Tanks ☒  
(If not, state date of approval)

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 ☒ *yes*

State the principal additional spare gear supplied ☒

The foregoing is a correct description,

*B. Coysk*

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1935 Oct. 3. 17. 22. 24. 28. 31. Nov. 7. 11. 28. Dec. 17. 1936 Feb. 24. 27. Mar. 2. 12. 16. 19. 23. 26. 30. Apr. 2. 6. 16. 23  
During erection on board vessel - -  
Total No. of visits *25*

Dates of Examination of principal parts—Cylinders 17. 2. 36. Covers 24. 2. 36. Pistons 17. 2. 36. Rods ☒ Connecting rods 28. 11. 35.

Crank shaft 11. 11. 35. Flywheel shaft 11. 11. 35. Thrust shaft ☒ 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 under working conditions 30. 3. 36.

Crank shaft, Material *S.M. Steel* Identification Mark *No. 3229 B.* Flywheel shaft, Material *S.M. Steel* Identification Mark *No. 3229 B.*

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 ☒

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 engine has been built under Special Survey in accordance with the Rules and approved plans.*

*Running trials were carried out at the Makers' Works under brake load with satisfactory results.*

*The engine has been efficiently installed on board the M.V. "SITALA", and tried under working conditions with satisfactory results.*

*P. Fitzgerald  
Glasgow*

Report form attached Gms. rpt. No. 19687

0/2270/P/IV. 5650 — 36/IV. 1.

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

Committee's Minute *GLASGOW 23 MAR 1937*

Assigned *SEE ACCOMPANYING MACHINERY REPORT.*

*A. L. Pilditch*  
Engineer Surveyor to Lloyd's Register of Shipping.  
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