

# REPORT ON OIL ENGINE MACHINERY.

No. 29725.  
May 1928

Date of writing Report

19

When handed in at Local Office

8 MAY 1928 Port of *Sunderland*

No. in Survey held at  
Reg. Book.

*Sunderland*

Date, First Survey 21<sup>st</sup> Oct 27 Last Survey 1<sup>st</sup> May 1928  
Number of Visits 71

on the *Single*  
*Twin* Screw vessels

*M. V. "SCHUYLKILL"*

Tons: Gross 8964  
Net 5365

Built at *Sunderland*

By whom built *Mr James Laine* Yard No. 702 When built 1928.

Engines made at *Sunderland*

By whom made *William Gifford & Co* Engine No. 168 When made 1928.

Donkey Boilers made at *W. Hartley*

By whom made *Richardson & Co* Boiler No. 1174 When made 1928.

Brake Horse Power 3500

Owners *Anglo American Oil Co*

Port belonging to *Sunderland*

Nom. Horse Power as per Rule 733

Is Refrigerating Machinery fitted for cargo purposes *No*

Is Electric Light fitted *Yes*

## IL ENGINES, &c.—Type of Engines

*Donford Offshore Pith*

2 or 4 stroke cycle 2 Single or double acting *SINGLE*

Maximum pressure in cylinders 568 lbs

No. of cylinders 4

Diameter of cylinders 620 = 24 3/8

No. of cranks 4, 3 throw. Length of stroke 1440 = 1040

span of bearings, adjacent to the Crank, measured from inner edge

1110

Is there a bearing between each crank *Yes*

Revolutions per minute 86

Flywheel dia. 2750

Weight 14.7 tons

Means of ignition *TEMPERATURE* Kind of fuel used *CRUDE OIL (F. POWER 1800)*

Crank Shaft, dia. of journals as per Rule *APPROVED*

as fitted 460

Crank pin dia. 500

Crank Webs Mid. length breadth 700

Mid. length thickness 300

Thickness parallel to axis 300

Flywheel Shafts, diameter as per Rule *APPROVED*

as fitted 460

Intermediate Shafts, diameter as per Rule *APPROVED*

as fitted 495

Thrust Shaft, diameter at collars as per Rule *APPROVED*

as fitted 460

Tube Shafts, diameter as per Rule *APPROVED*

as fitted

Screw Shaft, diameter as per Rule *APPROVED*

as fitted 495

Is the *tube* screw shaft fitted with a continuous liner *No*

as fitted

Bronze Liners, thickness in way of bushes as per Rule *APPROVED*

as fitted

Thickness between bushes as per rule *APPROVED*

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 *Yes*

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 *Yes*

If two liners are fitted, is the shaft lapped or protected between the liners *Yes*

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

end of the tube shaft *Yes*

Length of Bearing in Stern Bush next to and supporting propeller 6-0 1/2

Propeller, dia. 18-0

Pitch 15-3

No. of blades 4

Material *BRONZE*, whether Moveable *YES*

Total Developed Surface 100 sq. feet

Method of reversing Engines *COMPRESSED AIR*

Is a governor or other arrangement fitted to prevent racing of the engine when disengaged *YES*

Means of lubrication *FORCED*

Thickness of cylinder liners 1/8 *REINFORCED* the cylinders fitted with safety valves *YES*

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material *LAGGED* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *EXHAUST*

Cooling Water Pumps, No. *Two each indep.*

Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*

*FRESH WATER*

Bilge Pumps fitted to the Main Engines, No. *2*

Diameter *4"*

Stroke *12"*

Can one be overhauled while the other is at work *Yes*

Pumps connected to the Main Bilge Line

No. and Size *1, 40 TON BILGE*

*1, 40 TON GENERAL S. PMP*

*1, 250 TON BALLAST PUMP*

How driven *ELECTRIC MOTOR*

*STEAM*

*STEAM*

*STEAM*

Ballast Pumps, No. and size *1, 250 TONS PER HOUR*

Lubricating Oil Pumps, including Spare Pump, No. and size *2, 30 TONS PER HOUR EACH*

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 Engine and Boiler Room *3, 2 3/4"*

In Holds, &c.

*1, 3" Steam ejector after coffee can 2, 4" mechanical pump room*

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1, 2 8" TO BALLAST PUMP 1, 2 5 1/2" TO GENERAL SERV. PMP*

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

Are the Bilge Suctions in the Machinery Space

ed 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 *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*

That pipes pass through the bunkers

How are they protected

That 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 *Yes*

Is it fitted with a watertight door *Yes*

worked from *Yes*

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *Yes*

Main Air Compressors, No. *2*

No. of stages *2*

Diameters *13, 7 3/4, 3 1/2*

Stroke *7 1/2*

Driven by *STEAM*

Auxiliary Air Compressors, No. *1*

No. of stages *3*

Diameters *13, 7 3/4, 3 1/2*

Stroke *7 1/2*

Driven by *STEAM*

Small Auxiliary Air Compressors, No. *1*

No. of stages *3*

Diameters *9, 7 3/4, 2 1/2*

Stroke *6"*

Driven by *ELECTRIC MOTOR*

Scavenging Air Pumps, No. *1 DOUBLE ACTING*

Diameter *1680*

Stroke *1120*

Driven by *MAIN ENGINE*

Auxiliary Engines crank shafts, diameter as per Rule *3.541"*

as fitted *3.75"*

## IR 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 *YES*

What means are provided for cleaning their inner surfaces *MANHOLE DOOR (16" x 12")*

Is there a drain arrangement fitted at the lowest part of each receiver *YES*

High Pressure Air Receivers, No. *2*

Cubic capacity of each *270 CU. FT*

Internal diameter *4-1 1/2*

thickness *1 1/2*

Seamless, lap welded or riveted longitudinal joint *RIVETTED*

Material *STEEL*

Range of tensile strength *28 TO 32*

Working pressure by Rules *610 LBS.*

Starting Air Receivers, No. *TWO*

Total cubic capacity *270 CU. FT*

Internal diameter *4-1 1/2*

thickness *1 1/2*

Seamless, lap welded or riveted longitudinal joint *RIVETTED*

Material *STEEL*

Range of tensile strength *28 TO 32*

Working pressure by Rules *610 LBS.*





