

## REPORT ON OIL ENGINE MACHINERY.

No. 85442

Received at London Office 11 MAR 1930

Date of writing Report

10

When handed in at Local Office

8<sup>th</sup> March 1930. Port of

Newcastle-on-Tyne

No. in Survey held at  
Reg. Book.Date, First Survey 28<sup>th</sup> May 1929 Last Survey 4<sup>th</sup> March 1930.  
Number of Visits 100on the <sup>Single</sup>  
<sup>Triple</sup>  
<sup>Quadruple</sup>

Screw vessel

M.V. "ANGLO SWEDE"

Tons { Gross 8033  
Net 4498

Built at

Walker

By whom built Sir W. G. Armstrong Whitworth &amp; Co. (Sunderland) Ltd. No. 1048. When built 1930.

Engines made at

Stockholm

By whom made Aktief. Atlas Diesel Co. Ltd. Engine No. 5012 When made 1930.

Donkey Boilers made at

Sestawood

By whom made Sir W. G. Armstrong Whitworth &amp; Co. (Sunderland) Ltd. No. 79. Boiler No. 5929 When made 1930.

Brake Horse Power

3050

Owners Rederiaktiebolaget Tanker.

Port belonging to Stockholm

Nom. Horse Power as per Rule

848

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

Trade for which vessel is intended

Ocean Going.

OIL ENGINES, &c.—Type of Engines Polar Diesel Oil Engine Type MP 27 $\frac{1}{2}$ . 2 or 4 stroke cycle ✓ Single or double acting ✓

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. ✓ Weight ✓ Means of ignition ✓ Kind of fuel used ✓

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

Flywheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as per Rule ✓ Thrust Shaft, diameter at collars as per Rule ✓  
as fitted ✓ as fitted 13.9" ✓ as fitted 14.125" ✓ as fitted ✓

Tube Shaft, diameter as per Rule ✓ Screw Shaft, diameter as per Rule ✓ Is the { tube } shaft fitted with a continuous liner { Yes ✓  
as fitted ✓ as fitted 15.24" ✓ as fitted 15.75" ✓ as fitted 15.86" ✓ as fitted 6.25" ✓

Bronze Liners, thickness in way of bushes as per Rule ✓ Thickness between bushes as fitted ✓ Is the after end of the liner made watertight in the  
as fitted 78" ✓ as fitted 8.125" ✓ as fitted 6.25" ✓

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 Continuous ✓

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 No. Length of Bearing in Stern Bush next to and supporting propeller 5'-7" ✓

Propeller, dia. 16'-1" Pitch 14'-1" No. of blades 4. Material C.I. whether Moveable Solid Total Developed Surface 80 sq. feet

Method of reversing Engines ✓ Is a governor or other arrangement fitted to prevent racing of the engine when declutched ✓ 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 Lagged ✓ 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. Two Independent 12"x13"x12" 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 3. — 2 @ 6"x6"x6" (47 tons per hour) + One 10"x11"x10" (200 tons per hour).  
How driven Steam.

Ballast Pumps, No. and size One 10"x11"x10" (200 tons per hour) Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 8"x8½"x8" ✓

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 One 5" dia, 2 @ 3½" dia, 1 @ 2½" dia, 2 @ 5" Bilge Branch, One Cofferdam 2½" dia.  
In Holds, &c. Fore Peak 3" dia After Peak 4" dia Fore Hold 2 @ 2" ✓ Fore Cofferdam 4" dia After cofferdam 4" dia  
Two @ 5" dia ✓

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 Yes.

Are all Sea Connections fitted direct on the skin of the ship ✓ 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 ✓ 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 ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes ✓

What pipes pass through the bunkers None. 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 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. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. one No. of stages Three Diameters 16½"x9"x4½" Stroke 8½" Driven by Steam ✓

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 ✓

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 ✓

What means are provided for cleaning their inner surfaces ✓

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

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 ✓

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 ✓

6100-1711M

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

Yes.

Receivers

Yes.

Separate Tanks

Yes.

Donkey Boilers

Yes.

General Pumping Arrangements

Yes.

Oil Fuel Burning Arrangements

Yes.

SPARE GEAR 1 cylinder cover complete with all valves etc, & one complete set of valves for one cylinder, springs etc. Fuel needle valves for half the number of cylinders, 1 piston complete, with all piston rings, studs & nuts & one set of piston rings. 2 telescopic piston cooling pipes. (set of skew wheels for cam shaft drive, 1 set of studs & nuts for one cylinder cover, 2 top end bolts & nuts, 2 bottom end bolts & nuts, 1 set of coupling bolts for crank shaft, 1 set of bolts for intermediate shaft, 2. main bearing bolts. Main Engine Compressor & pumps 1 set of piston rings for each compressor piston. 1 Half set of suction & delivery valves for each stage of compressor. 10% of suction & delivery valves for scavenger air pump. all working parts for one fuel pump to one cylinder, 1 additional circulating pump fitted. Auxiliary pumps. 1 suction & one delivery valve for the daily service supply, 1 suction & one delivery valve for bilge pump. A quantity of assorted bolts & nuts. A quantity of pipe of each size used for the fuel delivery & injection air pipes to the main engine power cylinders & the air delivery from the main & auxiliary compressors to the receivers, with unions & flanges suitable for each. Spare screw shaft and other spare gear placed aboard.

The foregoing is a correct description,

W. G. ARMSTRONG WHITWORTH & COMPANY (ENGINEERS) LIMITED

1. 11/11/1929

Manufacturer.

1929  
Dates of Survey while building  
During progress of work in shops - May 28, June 5, 10, 17, 19, 24, July 1, 3, 4, 9, 11, 12, 16, 18, 23, 25, 29, 30, Aug. 1, 19, 21, 22, 23, 26, 27, 30, Sep. 2, 4, 6, 9, 10, 12, 13, 18, 19, 20, 24, 26, 27, 30, Oct. 1, 2, 3, 7, 8, 14, 16, 21, 23, 28, Nov. 4, 5, 6, 11, 12, 18, 20, 22, 27, Dec. 2, 3, 5, 6, 9, 10, 11, 13, 17, 18, 20, 23, 27, 31, Jan. 6, 7, 9, 10, 15, 20, 21, 22, 23, 29, 31, Feb. 1, 3, 4, 5, 6, 8, 12, 17, 22, 24, 26, Mar. 3, 4.  
During erection on board vessel -  
Total No. of visits 100.

Dates of Examination of principal parts - Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓  
Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts 21-10-29 Tube shaft ✓  
Screw shaft 2-9-29 Propeller 10-9-29 Stern tube 10-9-29 Engine seatings 23-10-29 Engines holding down bolts 7-2-30  
Completion of fitting sea connections 27-9-29 Completion of pumping arrangements 7-2-30 Engines tried under working conditions 22-2-30  
Crank shaft, Material ✓ Identification Mark ✓ Flywheel shaft, Material ✓ Identification Mark ✓  
Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material Steel Identification Marks 5568.  
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material Steel Identification Mark 5567.

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

Is this machinery duplicate of a previous case No. If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The oil engine machinery as per Stockholm Report No 3181 has been fitted on board this vessel & the general machinery installation constructed in a satisfactory manner and to the Rules Requirements & approved plans. The machinery has been tested & manoeuvred on completion under working conditions & found satisfactory. The machinery of this vessel is eligible in my opinion to be classed and to have the notation of "oil Engines" and records of T LMC 3, 30 and TS CL in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3, 30.

oil Engines 250 HP  
7 cy. 26 3/8 - 49 7/8. CL. 848 NHD  
DB (P) 180 H. DB (S) 130 H.

The amount of Entry Fee ... £ 6 : - :  
Special 1/5 for fitting £ 23 : 10 : -  
Donkey Boiler Fee ... £ 15 : 4 :  
Travelling Expenses (if any) £ : :  
When applied for, 10 MAR 1930  
When received, 17. 3. 30

L. Perrett.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 MAR 1930

Assigned

+ LMC 3, 30 Oil Eng.  
C. L. DB (P) 180 H (S) 130 H

CERTIFICATE WRITTEN.

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