

REPORT ON OIL ENGINE MACHINERY.

No. 11456

29 JAN 1935

Received at London Office

Port of **Belfast** Date, First Survey **19 July 1934** Last Survey **22 Jan 1935**
 Number of Visits **59**
 Name of vessel **"Acavus"** Tons **Gross 5000 Net 4700**
 Type of vessel **Screw vessel**
 Built at **Belfast** By whom built **Workman Clark 1928** Yard No. **536** When built **1935**
 Engines made at **Newcastle-on-Tyne** By whom made **R. W. Hawthorn Leslie & Co** Engine No. **3523** When made **1935**
 Monkey Boilers made at **Belfast** By whom made **Workman Clark 1928** Boiler No. **When made 1935**
 Brake Horse Power **3500** Owners **Anglo-Saxon Petroleum Co Ltd** Port belonging to **London**
 Indicated Horse Power as per Rule **502** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **yes**
 Trade for which vessel is intended **Carrying Oil in bulk**

L ENGINES, &c.—Type of Engines

Maximum pressure in cylinders **17.87** Diameter of cylinders **17.87** Length of stroke **13.37** No. of cylinders **4** No. of cranks **2**
 Position of bearings, adjacent to the Crank, measured from inner edge to outer edge **17.87** Is there a bearing between each crank **yes**
 Revolutions per minute **1100** Flywheel dia. **54"** Weight **3377** Means of ignition **spark** Kind of fuel used **shrink**
 Crank Shaft, dia. of journals **3547** Crank pin dia. **4607** Crank Webs **3377** Mid. length breadth **3377** Thickness parallel to axis **3547**
 Flywheel Shaft, diameter **3547** as per Rule **3547** as fitted **4607** Thrust Shaft, diameter at collars **3547** as per Rule **3547** as fitted **4607**
 Tube Shaft, diameter **3547** as per Rule **3547** as fitted **4607** Is the shaft fitted with a continuous liner **yes**
 Bronze Liners, thickness in way of bushes **17.87** as per Rule **17.87** as fitted **207** Thickness between bushes **13.37** as per Rule **13.37** as fitted **157** 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**
 Is 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 **yes**
 Length of Bearing in Stern Bush next to and supporting propeller **1600** sq. feet **78**

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched **yes** Means of lubrication **oil**
 Are the cylinders fitted with safety valves **yes** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **yes**
 If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine **yes**

Cooling Water Pumps, No.

Is the suction provided with an efficient strainer which can be cleared within the vessel **yes**
 Bilge Pumps worked from the Main Engines, No. **2** Diameter **8" x 8" x 10"** Can one be overhauled while the other is at work **yes**
 Pumps connected to the Main Bilge Line **yes** How driven **steam**

Ballast Pumps, No. and size

For pump room 1-50 tons **yes** Lubricating Oil Pumps, including Spare Pump, No. and size **2**
 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 **54" for 1-3 1/2"** Port for 1-3 1/2" **yes** Aft well 1-3 1/2" **yes** Aft CO-1-5" **yes** Centre pump room 2 1/2" **yes**
 In Holds, for pump room from **For store 2-2"** For cofferdam 1-4" **yes** For peak 1-4" **yes** For pump room 1-2 1/2" **yes** from drain pumps in pump rooms.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

1-6" **yes** 1-6 1/2" **yes** Are the Bilge Suctions in the Machinery Spaces **yes**
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **yes** Are they fitted with Valves or Cocks **yes**
 Are all Sea Connections fitted direct on the skin of the ship **yes** Are the Overboard Discharges above or below the deep water line **above**
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates **yes** Are the Blow Off Cocks fitted with a spigot and brass covering plate **yes**
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel **yes** How are they protected **yes**
 What pipes pass through the bunkers **1-5" cofferdam overboard aft.** Have they been tested as per Rule **yes**
 What pipes pass through the deep tanks **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 **26" x 12"** Stroke **18"** Driven by **Steam**
 Auxiliary Air Compressors, No. **2** No. of stages **2** Diameters **26"** Stroke **18"** Driven by **Steam**
 Small Auxiliary Air Compressors, No. **2** No. of stages **2** Diameters **26"** Stroke **18"** Driven by **Steam**
 Scavenging Air Pumps, No. **2** Diameter **26"** Stroke **18"** Driven by **Steam**

Auxiliary Engines crank shafts, diameter **3547** as per Rule **3547** as fitted **4607** Position **yes**

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 and cleaned **yes** Is a drain fitted at the lowest part of each receiver **yes**
 High Pressure Air Receivers, No. **2** Cubic capacity of each **500 cu. ft.** Internal diameter **60"** thickness **7/8"**
 Seamless, lap welded or riveted longitudinal joint **yes** Material **Steel** Range of tensile strength **28-32 tons** Working pressure **364 lbs**
 Starting Air Receivers, No. **2** Total cubic capacity **500 cu. ft.** Internal diameter **60"** thickness **7/8"**
 Seamless, lap welded or riveted longitudinal joint **yes** Material **Steel** Range of tensile strength **28-32 tons** Working pressure **364 lbs**

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

Steam driven auxiliaries

PLANS. Are approved plans forwarded herewith for Shifting No. 16-3-34

Receivers Yes

Separate Tanks Yes

Donkey Boiler Yes

General Pumping Arrangements Yes

Oil Fuel Burning Arrangements Yes

SPARE GEAR.

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

State the principal additional spare gear supplied

2 sets coupling bolts for main shafting

2 cylinder liners with extensions

1 set intermediate shaft coupling bolts

1 piston rod, crosshead & guide shoe

2 sets bottom end brasses with bolts

12 piston bolts, 1 connecting rod.

2 sets top end brasses with bolts

66 piston rings.

1 set main bearing bushes with bolts

2 fuel valve rollers pins & cams.

8 Exhaust valves complete. 8 exh. valve seats.

1 propeller shaft. 1 C.I. propeller

2 inlet valves and 2 relief valves complete

2 sets thrust pads

2 starting air valves complete

1 set driving gear wheels for camshaft

4 fuel pumps complete.

1 chain for camshaft drive.

2 cylinder heads & 2 pistons complete

6 telescopic pipes.

3 fuel injection pipes

1/2 section of crankshaft. M.E.

The foregoing is a correct description.

24 boiler tubes & 2 stay tubes.

PRO WORKMAN CLARK (1928) LIMITED.

30 condenser tubes.

J. Cunningham

Secretary. Manufacturer.

Dates of Survey while building	During progress of work in shops--	During erection on board vessel--	Total No. of visits
	July 19 Aug 8. 9. 20. 21. 22. 23. 24. 27. 29. 31	Sept 7. 10. Oct 8. 9. 11. 16. 17. 18. 19. 20. 25. 29. 30	59
	20. 21. 22. 23. 26. 27. 30	Dec 5. 6. 9. 10. 11. 13. 14. 18. 20. 31 1935	
	22.	Jan 2. 3. 4. 9. 10. 11. 12. 14. 15. 16. 17. 18	

Dates of Examination of principal parts--	Cylinders	Covers	Pistons	Rods	Connecting rods
Crank shaft	✓	✓	✓	✓	✓
Flywheel shaft	✓	✓	✓	✓	✓
Thrust shaft	✓	✓	✓	✓	✓
Intermediate shafts	✓	✓	✓	✓	✓
30-10-34	✓	✓	✓	✓	✓
Tube shaft	✓	✓	✓	✓	✓
Screw shaft	9-8-34	Propeller	9-10-34	Stern tube	12-11-34
Engine seatings	21-11-34	Engines holding down bolts	3-1-35	Engines tried under working conditions	16-1-35
Completion of fitting sea connections	21-11-34	Completion of pumping arrangements	15-1-35		

Crank shaft, Material	✓	Identification Mark	✓	Flywheel shaft, Material	✓	Identification Mark	✓
Thrust shaft, Material	✓	Identification Mark	✓	Intermediate shafts, Material	Steel	Identification Marks	✓
Tube shaft, Material	✓	Identification Mark	✓	Screw shaft, Material	Steel	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	Oil Tanker						
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	No						
If so, state name of vessel							

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

The Main and Auxiliary machinery has been efficiently installed and tried out at moored & sea trials with satisfactory results. In my opinion the vessel is eligible for Record in the Society's Register Book + LMC 1-35. CL. 1-DB 180lbs Electric Light. Oil Engines

An Interim Certificate issued in conjunction with hull report, copy attached to ship report.

The amount of Entry Fee	£ 8 : 8	When applied for,
Air Return	✓	16-1-35
Special	✓	16-1-35
1/5 fee (balance)	✓	16-1-35
Donkey Boiler Fee	✓	16-2-35
Travelling Expenses (if any)	✓	16-2-35

Committee's Minute

TUE. 12 FEB 1935

Assigned

+ LMC 1-35
DB - 180 lbs

CERTIFICATE WRITTEN

Charles J. Hunter
Engineer Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register
Foundation