

pt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 4599

FEB 28 1938

Received at London Office

Report of writing Report 24th Feb. 1938 When handed in at Local Office 19 Port of Stockholm  
 To. in Survey held at Sickla Skar. District Date, First Survey 18/11/36 Last Survey 14/12/37  
 eg. Book. Single on the Twin Screw vessel Mr. Oksywiec Number of Visits 13  
Triple  
Quadruple

Engines made at Stockholm By whom built O.Y. Crichton - Vulcan A-B. Yard No. 747 When built 1937  
 By whom made A-B. Atlas. Diesel. Engine No. 85597 When made 1937  
 Donkey Boilers made at Stockholm By whom made Boiler No. When made Boiler No.  
 Brake Horse Power 800 Owners Zegluga Polska Port belonging to Gdynia  
 Nom. Horse Power as per Rule 157 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
 Trade for which vessel is intended

**ENGINES, &c.** Type of Engines Polar Diesel Oil Engine, type M45 H. 2 or 4 stroke cycle 2 Single or double acting Single  
 Maximum pressure in cylinders 55 kg/cm<sup>2</sup> Diameter of cylinders 340 mm Length of stroke 570 mm No. of cylinders 5 No. of cranks 5  
 Mean Indicated Pressure 7 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 484 mm Is there a bearing between each crank Yes

Revolutions per minute 250 Flywheel dia. 1550 mm Weight 2580 kgs. Means of ignition Compression Kind of fuel used Heavy Diesel Oil

Crank Shaft, dia. of journals as per Rule Crank pin dia. 220 mm Crank Webs Mid. length breadth 308.3 mm Thickness parallel to axis shrunk  
as fitted 220 mm Mid. length thickness 122 mm Thickness around eyehole   
 The Flywheel is fitted at the aft end of the thrust shaft.  
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted Thrust Shaft, diameter at collars as per Rule  
as fitted as fitted as fitted 260 mm

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner   
as fitted as fitted screw

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 Movable  Total Developed Surface  sq. feet  
 Method of reversing Engines By compression air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

Pumps Thickness of cylinder liners 25.5 mm 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

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. 1 Diameter 100 mm Stroke 140 mm (Double acting.) 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 1: 350 litres/min.  
 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

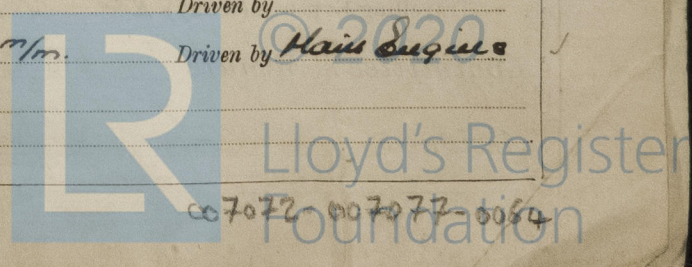
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one  
 compartment to another  Is the Shaft Tunnel watertight  Is it fitted with a watertight door  worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork   
 For starting air. Main Air Compressors, No. One No. of stages 2 Diameters 175/20 mm Stroke 350 mm Driven by Main Engine

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. One Diameter 850 mm Stroke 350 mm Driven by Main Engine

Auxiliary Engines crank shafts, diameter as per Rule No.  Position   
as fitted





AIR 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 and cleaned *Yes*.

Is a drain fitted at the lowest part of each receiver *Yes*.

High Pressure Air Receivers, No *None fitted* 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. *2*

Total cubic capacity

*1600 litres*

Internal diameter

*650 mm*

thickness

*14 mm*

Seamless, lap welded or riveted longitudinal joint *Riveted*

Material

*S.H. Steel*

Range of tensile strength

*44-50 kg/cm<sup>2</sup>*

Working pressure

by Rules

Actual *25 kg/cm<sup>2</sup>*

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

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

PLANS. Are approved plans forwarded herewith for Shafting

*E. 23/12/36*

Receivers

*E 10/9/35*

Separate Fuel Tanks

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

State the principal additional spare gear supplied

*As per enclosed list. The spare gear has been examined before it was despatched.*

*The additional water circulating pump and the daily fuel supply pump will be delivered by the Ship Builders.*

The foregoing is a correct description,

**AKTIEBOLAGET ATLAS DIESEL**

G. Jacobsson

Manufacturer.

Dates of Survey while building  
During progress of work in shops-- *18. 3. 36; 7. 30. 4; 7. 19. 27. 5; 7. 11. 6; 13. 25. 11; 2. 14. 12*  
During erection on board vessel---  
Total No. of visits *13 in shop*

Dates of Examination of principal parts—Cylinders *2/12/37* Covers *2/12/37* Pistons *2/12/37* Rods  
Crank shaft *19. 7. 2. 37* *5. 6. 12* *18. 3. 36. 2. 37* Thrust shaft *7. 7. 4. 37* Intermediate shafts  
Screw shaft  
Proneller  
Stern tube  
Engine seatings  
Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements

Engines tried under working conditions *25/11/37*

Crank shaft, Material *S.H. Steel*

Identification Mark

*LLOYDS No 7027*

*Scum air pump*

Elbowed shaft, Material *S.H. Steel*

Identification Mark

*LLOYDS No 6830*

Thrust shaft, Material *S.H. Steel*

Identification Mark

*LLOYDS No 6984*

Intermediate shafts, Material

Identification Mark

*7. B. 9. 12. 36*

Tube shaft, Material

Identification Mark

*7. B. 7. 5. 37*

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 *Please see Shw. Rpt. No 4579*

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

*We are of opinion that this engine is of superior material and workmanship, and as it has been designed and constructed under Special Survey, we have respectfully to submit that it be classed +LHC, as soon as it has been installed into Messrs. O.Y. Crichton. Vulcan F.B. of Abco. No 747, to the satisfaction of the Society's Surveyors.*

The amount of Entry Fee .. £

Special ...

*£595.-*

When applied for,

19

Donkey Boiler Fee ... £

Travelling Expenses (if any) *£2.20*

When received,

*paid June 22. 1938*

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Committee's Minute

FRI 6 MAY 1938

Assigned

*See Rpt 1511*

*R. J. Anderson & Thomas P. P. P.*  
Engineer Surveyor to Lloyd's Register of Shipping.



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