

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 4582.

Received at London Office

Date of writing Report 25th Jan. 1938 When handed in at Local Office

Port of Stockholm.

No. in Survey held at Sickla, Shus. District
Reg. Book.Date, First Survey 28.10.35 Last Survey 20.11.1938
Number of Visits 12on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel

H/S "DALNESS".

Tons { Gross 246
Net 91

Built at Heusden.

By whom built De Haan & Oerlemau

Yard No. 203 When built

Engines made at Stockholm.

By whom made A.B. Atlas-Diesel.

Engine No. 85498 When made 1937.

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 300

Owners John Owen Stone, Ltd.

Port belonging to Capetown.

Nom. Horse Power as per Rule 68

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Polar Diesel Oil Engine, Type M442 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 250 mm Length of stroke 420 mm No. of cylinders 4 No. of cranks 4
Mean Indicated Pressure 7

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 354 mm Is there a bearing between each crank Yes.

Revolutions per minute 300 Flywheel dia. 1048 mm Weight 1200 kgs. Means of ignition Compression Kind of fuel used Heavy Diesel Oil.

Crank Shaft, dia. of journals as per Rule 160 mm Crank pin dia. 160 mm Crank Webs Mid. length breadth 214 mm Thickness parallel to axis
as fitted 160 mm Mid. length thickness 90 mm Thickness around eyeholeThe Flywheel is fitted on the Hurst shaft.
Flywheel Shaft, diameter as fitted Intermediate Shafts, diameter as fitted Thrust Shaft, diameter at collars as per Rule 160 mm
as fitted

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

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the

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 Compressed 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 19.5 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. 1 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 85 mm Stroke 60 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 2. Each 115 ltr./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

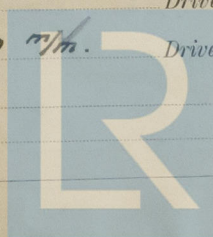
For starting air. Main Air Compressors, No. 1 No. of stages 2 Diameters 140/55 mm Stroke 240 mm Driven by Main Engine.

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. 1 Diameter 580 mm Stroke 240 mm Driven by Main Engine.

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

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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 800 litres

Internal diameter 550 mm

thickness 11 mm

Seamless, lap welded or riveted longitudinal joint Riveted

Material S.M. Steel

Range of tensile strength 4244 kg/mm²

Working pressure by Rules

Actual 25 kg/cm²

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 10.6.37

Receivers E 23.1.36

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. Jacobson

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 28. 20 35; 5. 12 5. 9 36; 7. 19. 12. 18. 19. 20 37.
During erection on board vessel - - 10 12 3 4 5 4 5 4 5
Total No. of visits 12 in shop.

Dates of Examination of principal parts—Cylinders 18/11/37 Covers 18/11/37 Pistons 18/11/37 Rods 7. 19 19 37.
Crank shaft 5. 15 36. 19 37 Thrust shaft 28. 20 35; 19 37 Intermediate shafts 10 12 Tube shaft 4 5 11
Screw shaft 9 4 Propeller 4 5 Stern tube 11 Engine seatings 11 Engines holding down bolts 11

Completion of fitting sea connections. Completion of pumping arrangements. Engines tried under working conditions 12/11/37.

Crank shaft, Material LLOYD'S NO 6639 Identification Mark S.M. Steel Flywheel shaft, Material S.M. Steel Identification Mark LLOYD'S NO 6663
Thrust shaft, Material LLOYD'S NO 6523 Identification Mark S.M. Steel Intermediate shafts, Material Identification Marks T.B. 20.12.35
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 See Shw. Rpt. No 4486.

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

I am of opinion that this engine is of superior material and workmanship, and as it has been designed and constructed under Special Survey, I have respectfully to submit that it be classed +LHC, as soon as it has been installed into Messrs. De Haru & Oerleman, Beusden, Yard No 203, to the satisfaction of the Society's Surveyors.

The amount of Entry Fee .. £ : : When applied for, .. 19.
Special £ 258.- : :
Donkey Boiler Fee ... £ : : When received, .. 11. 4 19 38
Travelling Expenses (if any) £ : : .. 11. 4

Committee's Minute

TUE. 8 FEB 1938

Assigned

See Rot 26459

Thorsten Nilsson

Engineer Surveyor to Lloyd's Register of Shipping.



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