

Rpt. 4b.

Report on Oil Engine Machinery.

No. 6081...

17 JAN 1946

Date of writing Report 10.1.45 When handed in at Local Office 19. Port of Stockholm
No. in Survey held at Stockholm Date, First Survey 4.10.44 Last Survey 22.12.45
Reg. Book. Number of Visits 13

Single
on the Twin Screw vessel "KLOVERTRE" Tons Gross 721
Triple Net 466
Quadruple

Built at Stockholm By whom built Ekemberg & Son Yard No. 185 When built 1945
Engines made at Stockholm By whom made Atlas Diesel Engine No. 86002 When made 1945
Donkey Boilers made at Stockholm By whom made Atlas Diesel Engine No. 1505 When made 1945
Brake Horse Power 680 Owners The Eastern Shipping Co. Ltd Port belonging to Oslo
Nom. Horse Power as per Rule 135 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Atlas Diesel Oil engine, 4444 2 or 4 stroke cycle 2 Single or double acting single
Maximum pressure in cylinders 60 kg/cm² Diameter of cylinders 340 mm Length of stroke 520 mm No. of cylinders 4 No. of cranks 2
Mean Indicated Pressure 2.5 kg/cm²

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 494 mm Is there a bearing between each crank Yes
Revolutions per minute 260 Flywheel dia. 1200 mm Weight 980 kg Means of ignition Compu Kind of fuel used Diesel Oil

Crank Shaft, { Solid forged as per Rule 235 mm Crank pin dia. 235 mm Crank Webs Mid. length breadth 384 mm Thickness parallel to axis 130 mm
Semi built dia. of journals as fitted 235 mm Mid. length thickness 130 mm shrunk Thickness around eyehole 130 mm
All built

Flywheel Shaft, diameter as per Rule 252 mm Intermediate Shafts, diameter as per Rule 180 mm Thrust Shaft, diameter at collars as per Rule 252 mm
(THRUST SHAFT) as fitted 252 mm as fitted 180 mm as fitted 252 mm

Tube Shaft, diameter as per Rule 126 mm Screw Shaft, diameter as per Rule 126 mm Is the {tube} shaft fitted with a continuous liner {No}

Bronze Liners, thickness in way of bushes as per Rule 126 mm Thickness between bushes as per Rule 126 mm 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 If so, state type Bedwell Gland Length of Bearing in Stern Bush next to and supporting propeller 805 mm

Propeller, dia. 3260 mm Pitch 1400 mm No. of blades 3 Material Cast whether Moveable No Total Developed Surface 12 m²

Method of reversing Engines 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. Yes

Cooling Water Pumps, No. One Is the sea provided with an efficient strainer which can be cleared within the vessel. Yes

Bilge Pumps worked from the Main Engines, No. One Diameter 90 mm Stroke 140 mm Double Acting Can one be overhauled while the other is at work. Yes

Pumps connected to the Main Bilge Line { No. and Size One 18 tons/hour One 25 tons/hour One 23.1 tons/hour
How driven St. motor St. motor Steam engine

Is the cooling water led to the bilges. No 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 None Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 365 lts/min (Main engine)

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 4 off 3" to bilge In Pump Room 1

In Holds, &c. One 2" from fwd cofferdam; One 3" from fwd hold; One 2" fr. aft cofferdam

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 off 3"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes. Yes 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. Yes Are they fitted with Valves or Cocks. Valves

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates. No Are the Overboard Discharges above or below the deep 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

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. 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

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. One No. of stages 2 Diameters 125/207 Stroke 350 mm Driven by Main engine

Auxiliary Air Compressors, No. One No. of stages 2 Diameters 40/95 Stroke 135 mm Driven by Aux. engine

Small Auxiliary Air Compressors, No. One No. of stages 1 Diameters 40/95 Stroke 135 mm Driven by

What provision is made for first Charging the Air Receivers. The aux. engine driving the above aux. compressors started by hand

Scavenging Air Pumps, No. One Diameter 720/125 Stroke 350 mm Driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule 135 mm Position In ER

Have the Auxiliary Engines been constructed under special survey. Yes Is a report sent here with Certificate of Construction.

014110-014123-0013

AIR RECEIVERS:—Have they been made under survey Yes State No. of Report or Certificate Serial No. 4197
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
Injection Air Receivers, No. None Cubic capacity of each Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure
Starting Air Receivers, No. Two Total cubic capacity 2000 litres Internal diameter 650 mm thickness 14 mm
Seamless, lap welded or riveted longitudinal joint Riveted Material St. Steel Range of tensile strength 43.5-42.4 Working pressure 25 kg/cm²
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 No
PLANS. Are approved plans forwarded herewith for Shafting 3.2.44 Receivers 19.1.43 Separate Fuel Tanks ✓
(If not, state date of approval)
Donkey Boilers 12.5.44 General Pumping Arrangements 27.4.48 Pumping Arrangements in Machinery Space 27.4.44
Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
State the principal additional spare gear supplied

The foregoing is a correct description,

ARTUR AGENTILAS DIESEL A.B. EKENSBERGS VARV

Enriksholman T. Hyppa Manufacturer.

Dates of Survey During progress of work in shops 4.5.13/10-44
During erection on board vessel 4/10-22/12-45
Total No. of visits 13
Dates of Examination of principal parts—Cylinders 13.10.44 Covers 13.10.44 Pistons 13.10.44 Rods ✓ Connecting rods 13.10.44
Crank shaft 13.10.44 Flywheel shaft ✓ Thrust shaft 13.10.44 Intermediate shafts 4.10.45 Tube shaft ✓
Screw shaft 4.10.45 Propeller 4.10.45 Stern tube 5.10.45 Engine seatings 27.10.45 Engines holding down bolts 27.10.45
Completion of fitting sea connections 18.10.45 Completion of pumping arrangements 16.12.45 Engines tried under working conditions 27.10.45
Crank shaft, Material St. Steel Identification Mark T.B. 13.10.44 Flywheel shaft, Material ✓ Identification Mark ✓
Thrust shaft, Material St. Steel Identification Mark T.B. 13.10.44 Intermediate shafts, Material St. Steel Identification Marks S.A. 4.10.45
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material St. Steel Identification Mark S.A. 4.10.45
Identification Marks on Air Receivers No. 9582 & 9583
LOYD'S TEST 50 kg.
W.P. 25 kg.
T.B. 24.2.44

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 ✓ 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 Yes
Is this machinery duplicate of a previous case Yes If so, state name of vessel "Haukhamen", Sten. Reg. No. 5848

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This engine has been built under Special Survey in accordance with the Rules. The workmanship is good and the material fulfils the requirements of the Rules. The dimensions are as specified and in accordance with the Rules and approved plans. All material for this engine has been made & tested in Sweden. The engine has been tested under full working power during trial trip and found to work satisfactorily. Approved for terminal steam.
In my opinion, the machinery of this vessel is eligible to be classed in the Register Book, with the notation of +LMC 12.45.

The amount of Entry Fee 46. 52/- When applied for, 10.1.19.46
Special 46. 59/-
Donkey Boiler Fee 46. 80/- When received, 19.1.46
Travelling Expenses (if any) £

COMMITTEE'S MINUTE FRI. 1 MAR 1946

ASSIGNED +LMC 12.45 Oil Eng Subject.
O.G. DB. 11416.



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