pt. 4 b.

Report on Oil Engine Machinery.

No. 5729.

Received at London Office .....

ate of writing Report 12th Febr. 1944. When handed in at Local Office ..... 19..... Port of Stockholm

o. in Survey held at Stockholm Date, First Survey 6th May, 1942 Last Survey 13.1. 19 44.
eg. Book. Number of Visits 22.

–.....on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel m/t "SKANSEN" Tons Gross 717 Net 446

uilt at Stockholm By whom built A.-B. Ekensbergs Varv Yard No. 179 When built 1943

ngines made at Stockholm By whom made A.-B. Atlas-Diesel Engine No. 85991 When made 1943

onkey Boilers made at Norrköping By whom made W. Söderströms Gjuteri- & Mek. Verkstads A.-B. Boiler No. 1450 When made 1943

rake Horse Power 680 Owners Enhörnings Kem. Tekniska A.-B. Port belonging to Stockholm

om. Horse Power as per Rule 125 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.

rade for which vessel is intended –

IL ENGINES, &c.—Type of Engines Polar Diesel Oil Engine, Type M44M 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 60 kgs/cm² Diameter of cylinders 340 mm Length of stroke 570 mm No. of cylinders 4 No. of cranks 4
Mean Indicated Pressure 7 "

pan 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. 1550 mm Weight 1900 kgs Means of ignition Compr. Kind of fuel used Diesel Oil

Crank Shaft, ~~Solid forged~~ ~~Semi-built~~ ~~All-built~~ dia. of journals as per Rule – as fitted 235 mm Crank pin dia 235 mm Crank Webs Mid. length breadth 324 mm Mid. length thickness 130 mm shrunk Thickness parallel to axis – Thickness around eyehole –

The flywheel is fitted on the thrustshaft

Flywheel Shaft, diameter as per Rule – as fitted – **Intermediate Shafts,** diameter as per Rule – as fitted 170 mm **Thrust Shaft,** diameter at collars as per Rule – as fitted 260 mm

Tube Shaft, diameter as per Rule – as fitted – **Screw Shaft,** diameter as per Rule – as fitted 180 mm Is the ~~tube~~ screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule – as fitted 13 mm Thickness between bushes as per Rule – as fitted – 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 –

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 If so, state type – Length of Bearing in **Stern Bush** next to and supporting propeller 835 mm

Propeller, dia. 2260 mm Pitch 1425 mm No. of blades 3 Material Cast steel Whether Moveable No Total Developed Surface 1.7 m² sq. feet

Method of reversing Engines Comp. 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 The exhaust pipes led through funnel

Cooling Water Pumps, No. One from main engine Is the sea ~~pump~~ 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 Can one be overhauled while the other is at work –

Pumps connected to the **Main Bilge Line** { No. and Size One; 25.2 tons per hour. One; 18 tons per hour. One; 330 lit/min.
How driven Main engine Auxiliary engine Electr. motor

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 One; 18 tons/hour **Power Driven Lubricating Oil Pumps,** including Spare Pump, No. and size 2. 265 lit/min. each

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 off 2½"; 3 off 3". In Pump Room –

In Holds, &c. Dry hold; One off 2"; Cofferdam; 2 off 2".

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One off 2½"; One off 3".

Are all the Bilge Suction pipes in Hold ~~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 No 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 Yes 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 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 None fitted 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. One No. of stages 2 Diameters 175-70 mm Stroke 350 mm Driven by Main engine

Auxiliary Air Compressors, No. One No. of stages 2 Diameters 40-95 mm Stroke 125 mm Driven by Auxiliary engine

Small Auxiliary Air Compressors, No. – No. of stages – Diameters – Stroke – Driven by –

What provision is made for first Charging the Air Receivers The above auxiliary air compr. can be started by hand.

Scavenging Air Pumps, No. One Diameter 770 - 175 mm Stroke 350 mm Driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule – as fitted 80 mm - 80 mm - 80 mm No. – Position In the engine room

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent here with See Skm. Reports Nos. 5675, 5628 and 5629

AIR RECEIVERS:—Have they been made under survey..Yes..*State No. of Report or Certificate*..Certificate No. 3785..

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 fitted..*Cubic capacity of each*..–..*Internal diameter*..–..*thickness*..–..

Seamless, lap welded or riveted longitudinal joint..–..*Material*..–..*Range of tensile strength*..–..*Working pressure* by Rules ..–.. Actual ..–..

Starting Air Receivers, *No.*..Two..*Total cubic capacity*..2 x 1000 lit..*Internal diameter*..650 mm..*thickness*..14 mm..

Seamless, lap welded or riveted longitudinal joint...Riveted..*Material*..S.M. steel..*Range of tensile strength*..43.5-46.4 kgs/mm²..*Working pressure* by Rules ..–.. Actual ..25 kgs/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 e approved plans forwarded herewith for Shafting..23.12.36, 30.9.37..*Receivers*..29.1.37..*Separate Fuel Tanks*..–..
(*If not, state date of approval*)

Donkey Boilers..21.7.42..*General Pumping Arrangements*..9.4.43..*Pumping Arrangements in Machinery Space*..9.4.43..

Oil Fuel Burning Arrangements..–..

SPARE GEAR.

Has the spare gear required by the Rules been supplied..Yes. Please, see enclosed list..

State the principal additional spare gear supplied..

The foregoing is a correct description,

AKTIEBOLAGET ATLAS DIESEL
WALTER WESTLUND

..*Manufacturer.*

Dates of Survey while building

During progress of work in shops- - 6.5, 23.5, 21.8 & 5.9 1942; 15.2 & 8.3 1943

During erection on board vessel- - - 4&22/6, 16/7, 24, 25, 27, 28/9, 4, 8, 27, 28, 29, 30/10, 9&27/11, 1943, 13/1 1944.

Total No. of visits..22.

Dates of Examination of principal parts—Cylinders..8.3.43..*Covers*..8.3.43..*Pistons*..8.3.43..*Rods*..–..*Connecting rods*..6&23/5;-42 1942/1943/

Crank shaft..6 & 23/5;-43 1943/..*Flywheel shaft*..–..*Thrust shaft*..11/3 & 16/4;..*Intermediate shafts*..10/2, 29/10;..*Tube shaft*..–..

Screw shaft..4/6, 29/10;..*Propeller*..29/10;-43..*Stern tube*..16/7;-43..*Engine seatings*..22/6;-43..*Engines holding down bolts*..–..

Completion of fitting sea connections..16/7;-43..*Completion of pumping arrangements*..28/10;-43..*Engines tried under working conditions* in shop 15.2.43 on trial trip 28.10.43

Crank shaft, Material..S.M. steel..*Identification Mark*..KA 23.5.42 LLOYD'S NO.9368..*Flywheel shaft, Material*..–..*Identification Mark*..LLOYD'S NO. 8720 TB 29.10.43

Thrust shaft, Material..S.M. steel..*Identification Mark*..KA 16.4.42 LLOYD'S NO.9332..*Intermediate shafts, Material*..S.M. steel..*Identification Marks*..

Tube shaft, Material..–..*Identification Mark*..–..*Screw shaft, Material*..S.M. steel..*Identification Mark*..LLOYD'S NO. 8719 KA 4.6.43

Identification Marks on Air Receivers..Nos. 9446 & 9447 LLOYD'S TEST 50 KG. W.P 25 KG. TB 28.11.42

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..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..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...

This engine has been built under Special Survey and all the requirements of the Rules have been complied with. The shafting as per forging reports attached. The workmanship is good and the materi fulfils the requirements of the Rules. The dimensions are as specified and in accordance with the Rules and approved plans. The whole machinery has been tested under full working power on trial tri and found to work satisfactorily.

In my opinion the above machinery is eligible to be classed in the Register Book with the notatio of +LMC 1,44, subject to the Electric Winch being replaced by one of approved type.

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Certificate (if required) to be sent to.....

The amount of Entry Fee.....	Kr.	57:—
Special	Kr.	594:—
Donkey Boiler Fee.....	Kr.	80:—
Travelling Expenses (if any)	£	: :
" " for DB	Kr.	59:50

When applied for, 12.2. 1944.

When received, ... 19.....

Engineer Surveyor to Lloyd's Register of Shipping.

COMMITTEE'S MINUTE.....

ASSIGNED.....

Elanders, Gbg. 53. 16.6.41.