

## Report on Oil Engine Machinery.

No. 14891.

26 AUG 1946

Received at London Office

Date of writing Report... 21st August 1946... When handed in at Local Office... 22nd Aug. 1946. Port of... Gethenborg

No. in Survey held at Marstrand &amp; Gethenborg... Date, First Survey... 12th July... Last Survey... 24th July 1946... Reg. Book... Number of Visits... 5

33791... on the ~~XXXX~~ ~~XXXX~~ ~~XXXX~~ Single Screw vessel... m/s "S.E.R.I.G.I." (launched as "Stadt Schleswig")... Tons {Gross... 514 Net... 297} Launched 1944

Built at... Marstrand... By whom built... Marstrand Msk. Varkstad AB... Yard No. 17... When built... 1946-7

Engines made at... Stockholm... By whom made... Messrs. Atlas Diesel... Engine No. 85911... When made... 1942

Donkey Boilers made at... By whom made... Boiler No. ... When made...

Brake Horse Power... 750... Owners... Dr. Humberto Armas... Port belonging to... Rio de Janeiro

Nom. Horse Power as per Rule... 181... Is Refrigerating Machinery fitted for cargo purposes... No... Is Electric Light fitted... Yes

Trade for which vessel is intended... Coasting service

OIL ENGINES, &amp;c.—Type of Engines... Heavy Oil, Diesel engine... 2 or 4 stroke cycle... 2... Single or double acting... Single

Maximum pressure in cylinders... 60 kg/cm<sup>2</sup> (13.3/8") (22.7/16")... 5+scaveng. air pumpMean Indicated Pressure... 6.94 kg/cm<sup>2</sup> Diameter of cylinders... 340 mm... Length of stroke... 570 mm... No. of cylinders... 5... No. of cranks... crank

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... 235... Flywheel dia... 1550 mm... Weight... 2580 kg... Means of ignition... Compression Kind of fuel used... Diesel oil

Crank Shaft, {Solid forged dia. of journals... 220 mm... as fitted... 220 mm... Crank pin dia... 220 mm... Crank Webs... Mid. length breadth... 308 mm... Thickness parallel to axis... Mid. length thickness... 122 mm... Thickness around eye-hole...}

Flywheel... Intermediate Shaft, diameter... 168 mm... Thrust Shaft, diameter at collars... 220 mm

Tube Shaft, diameter... as per Rule... as fitted... Screw Shaft, diameter... 185 mm... as fitted... 185 mm... Is the {screw} shaft fitted with a continuous liner... No

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... Yes... If so, state type... Coderwall's Oil gland... Length of Bearing in Stern Bush next to and supporting propeller... 925 mm... metres

Propeller, dia... 2460 mm... Pitch... 1650 mm... No. of blades... 3... Material... Cast iron whether Moveable... No... Total Developed Surface... 2.00 sq. m

Method of reversing Engines... Compr air... Is a governor or other arrangement fitted to prevent racing of the engine when decoupled... Yes... Means of lubrication

Forced... 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... lagged... If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine... to funnel

Cooling Water Pumps, No. 1 ballast 32 tons/h &amp; 1 sanitary 15 tons/h... 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... Capacity 430 lit/min... Can one be overhauled while the other is at work...

Pumps connected to the Main Bilge Line {No. and Size... 1 - bilge pump... 1 ballast pump: 32 tons/h, 1 bilge pump 15 tons/h} How driven... by Main engine... Electrically... Electrically

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... 1 - 200 litres/min. 1 - 32 tons/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 main engine: 3301/m

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... 1 x 2" In Pump Room... In Holds, &amp;c... Hold No. 1 - 2 x 2", Hold No. 2 - 4 x 2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size... 1 x 2" (to bilge pump), 1 x 2" (to ballast pump)

Are all the Bilge Suction pipes in Holds... fitted with strum-boxes... Yes... Are the Bilge Suctions in the Machinery Spaces

led from easily accessible mud-boxes, placed at the level of the working floor, with straight tail pipes to the bilges... Not all

Are all Sea Connections fitted direct on the skin of the ship... Yes... Are they fitted with Valves or Cocks... Yes

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 water line... below

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...

What pipes pass through the bunkers... No coal bunkers... How are they protected...

What pipes pass through the deep tanks... No 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... No tunnel... 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... Two... Diameters... 175-70 mm... Stroke... 350 mm... Driven by... Main engine

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

Small Auxiliary Air Compressors, No. One... No. of stages... Two... Diameters... 80-30 mm... Stroke... 80 mm... Driven by... Manual

What provision is made for first Charging the Air Receivers... The above manual compressor

Scavenging Air Pump, No. One... Diameter... 850 mm... Stroke... 350 mm... Driven by... Main engine

Auxiliary Engines crank shafts, diameter... approved pin 120 mm., journal: 125 mm. No. Two as fitted pin 120 mm., journal: 125 mm. Position... Engine room floor: One on Port, one on Sth. side

Have the Auxiliary Engines been constructed under special survey... Yes Germanischer Lloyd... Is a report sent here with... Yes

AIR RECEIVERS:—Have they been made under survey.....**Yes**.....State No. of ~~Survey~~ Certificate **GL 454 SM 457 S.M.**  
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. ....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. **Two**.....Total cubic capacity **2 x 1500 litres**.....Internal diameter **650 mm.**.....thickness **shell: 14 mm. Ends: 16 mm.**  
Seamless, lap welded or riveted longitudinal joint.....**Riveted**.....Material **S.M. Steel**.....Range of tensile strength **44-50 kg/cm<sup>2</sup>**.....Working pressure by Rules **26.55 kg/cm<sup>2</sup>**  
Actual **25 kg/cm<sup>2</sup>**  
IS A DONKEY BOILER FITTED?.....**No**.....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 **London 10.7.1946.** Receivers.....Separate Fuel Tanks.....  
(If not, state date of approval)  
Donkey Boilers.....General Pumping Arrangements **London 10.7.1946.** Pumping Arrangements in Machinery Space **London 10.7.1946.**  
Oil Fuel Burning Arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied.....**Yes**  
State the principal additional spare gear supplied.....**One cover complete with valves, one piston with gudgeon pin, one complete cylinder liner, and one safety valve.**

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }  
{ During erection on board vessel - - }  
Total No. of visits.....**5**.....**12 - 24.7.1946.**.....**5 visits**  
Dates of Examination of principal parts—Cylinders **2 - 1942** Covers **2 - 1942** Pistons **20.7.1946.** Rods.....Connecting rods **20.7.1946.**  
Crank shaft **20.7.1946.** Flywheel shaft.....Thrust shaft **20.7.1946.** Intermediate shafts **4 - 1942.** Tube shaft.....  
Screw shaft **4 - 1942.** Propeller **12.7.1946** Stern tube.....Engine seatings.....Engines holding down bolts.....  
Completion of fitting sea connections.....Completion of pumping arrangements **24.7.1946.** Engines tried under working conditions **23.7.1946.**

Crank shaft, Material **S.M. Steel** Identification Mark **9089 T.B.** Flywheel shaft, Material.....Identification Mark **No. 458**  
Thrust shaft, Material **S.M. Steel** Identification Mark **9061 T.B.** Intermediate shafts, Material **S.M. Steel** Identification Marks **SM 4-42 G.L.**  
Tube shaft, Material.....Identification Mark.....Screw shaft, Material **S.M. Steel** Identification Mark **No. 458**  
**SM 4-42 G.L.**

Identification Marks on Air Receiver.....  
**Avesta**  
**Sweden**  
**No. 172806-7**  
**Prev. tr. 50 kg**  
**Arb. tr. 25 kg**  
**16 - 1 - 1946.**

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.....**No**.....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.....**not desired**  
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 propeller and fastenings of the sea connections examined.**

**Regarding survey of propeller shaft, please see Secretary's letter "S" 20.7.1946. The whole of the main and auxiliary machinery opened up, examined and found in order. The scantlings of the crank thrust and intermediate shafting have been checked and found to be in accordance with the approved plan. See Secretary's letter "E" 12 - 7 - 1946.**

**Lloyd's forging reports of the crank and thrust shafting and Germanischer Lloyd's forging report of the intermediate and thrust shafting are attached. A notice board has been fitted at the control station stating that the main engine is not to be run continuously between 145 and 170 r.p.m. and the tachometer scale between the above revolutions has been marked red. See Secretary's letter "E" 26.7.1946.**

**The machinery of this vessel is eligible in our opinion to be classed in the Register Book with record of LMC 7 - 46 and OG subject to the propeller shaft being examined before the end of January 1947.**

The amount of Entry Fee.....**L - : -** : When applied for, **29/7 19.46**  
Special.....**Kr. 360:00** : When received, **29/7 19.46**  
Donkey Boiler Fee.....**£ - : -**  
Travelling Expenses (if any) **£ - : -**

COMMITTEE'S MINUTE

ASSIGNED **LMC 7.46 Oil Eng. Subject**  
**O.G.**

**A. Sjögren**  
Engineer Surveyor to Lloyd's Register of Shipping.



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