

REPORT ON OIL ENGINE MACHINERY.

No. 12106
NOV 25 1938

Received at London Office

of writing Report 18th November 1938 When handed in at Local Office 23rd November 1938 Port of **GOTHENBURG**

Survey held at **GOTHENBURG** Date, First Survey 9th February Last Survey 15th November 1938
Number of Visits 90

Single
on the **Triple** Screw vessel
Quadruple

M/S "GARD"

Tons { Gross 8259.89
Net 4958.56

at **GOTHENBURG** By whom built **ERIKSBERGS M.V. AKTIEB.** Yard No. 283 When built 1938
is made at **GOTHENBURG** By whom made **ERIKSBERGS M.V. AKTIEB.** Engine No. 205 When made 1938
Boilers made at **GOTHENBURG** By whom made **ERIKSBERGS M.V. AKTIEB.** Boiler No. 578 When made 1938
Horse Power 3680 Owners **SKIBS A/S CORONA** Port belonging to **HAUGESUND**
Horse Power as per Rule 644 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES
for which vessel is intended **GENERAL**

NGINES, &c. Type of Engines **Vertical Diesel, Crosshead type, Solid injection** 2 or 4 stroke cycle 2 Single or double acting **Double**
n pressure in cylinders **49 kg/cm²** Diameter of cylinders **17 1/16" = 450 mm** Length of stroke **47 1/4" = 1200 mm** No. of cylinders 6 No. of cranks 6
licated Pressure **4-6.9; 6-6.5**

bearings, adjacent to the Crank, measured from inner edge to inner edge **854 mm** Is there a bearing between each crank **Yes**
ns per minute **125** TURNING GD² **2400 kg/mm²** BALANCE- GD² **22640 kg/mm²** Means of ignition **Compression** Kind of fuel used **Diesel fuel oil**

{ Solid forged dia. of journals **360 mm** Crank pin dia. **360 mm** Crank Webs Mid. length breadth **✓** Thickness parallel to axis **216-224 mm**
{ Semi built as fitted **360 mm** with 115 mm central hole Mid. length thickness **✓** shrunk Thickness around eyehole **205 mm**
{ All built **360 mm** as fitted **443 mm** Thrust Shaft, diameter at collars **360 mm**
el Shaft, diameter as fitted **360 mm** Intermediate Shafts, diameter as fitted **443 mm**

shaft, diameter as per Rule **✓** Screw Shaft, diameter as fitted **450 mm** Is the { tube } shaft fitted with a continuous liner { **Yes**
as fitted **21 mm** as fitted **21 mm**

Liners, thickness in way of bushes as fitted **21 mm** Thickness between bushes as fitted **21 mm** Is the after end of the liner made watertight in the

boss **Yes** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **divided in one length**

ner 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 **✓**

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

Yes If so, state type **Vickers "Vistealand", No 3 Simplex** Length of Bearing in Stern Bush next to and supporting propeller **2180 mm.**

er, dia. **5029 mm** Pitch **3150 mm.** No. of blades **4** Material **Brongze** whether Moveable **No** Total Developed Surface **8.06** sq. feet

of reversing Engines **Direct reversible** Is a governor or other arrangement fitted to prevent racing of the engine when declatched **Yes** Means of lubrication

Thickness of cylinder liners **31 mm** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled or lagged with

ducting 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 **led to funnel**

g Water Pumps, No. **2** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**

Pumps worked from the Main Engines, No. **None** Diameter **✓** Stroke **✓** Can one be overhauled while the other is at work **✓**

connected to the Main Bilge Line { No. and Size **One piston pump, 20 tons/hour, 1 duplex 190 x 150 x 250 mm / 1 ballast pump 150 tons/hour**
How driven **electrically steam electrically**

ooling 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

nents **✓** Pumps, No. and size **One, 150 tons/hour** Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **Two, 2930 lit/min. each**

independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

No. and size:—In Machinery Spaces **Three-3 1/2" and One-3"** SUCTIONS CONNECTED TO BILGE PUMPS In Pump Room

in the Main pump room: **Four-4" from steam bilge pumps. Four pump room: One 2 1/2" from steam bilge pumps. Two 2 1/2" from dry cargo hold.**

endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **One 5" from ballast pump, one 3 1/2" from steam pump, one 3" from bilge pump.**

the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **Yes** Are the Bilge Suctions in the Machinery Spaces

n easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **Yes**

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

y 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**

y 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**

ipes pass through the bunkers **None** How are they protected **✓**

ipes pass through the deep tanks **Cargo pipes & heating coils** Have they been tested as per Rule **Yes**

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **Yes**

rrangement 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** 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 **✓**

140.0
560.0
492.0
18
9.23
1.2.3
70

Main Air Compressors, No. **None** No. of stages **✓** Diameters **✓** Stroke **✓** Driven by **✓**
Auxiliary Air Compressors, No. **2** No. of stages **2** Diameters **250-280 mm** Stroke **190 mm** Driven by **Aux. engine**
Small Auxiliary Air Compressors, No. **1** No. of stages **✓** Diameters **✓** Stroke **✓** Driven by **Steam engine**
What provision is made for first Charging the Air Receiver **Small auxiliary, steam driven compressor**
Scavenging Air Pumps, No. **2** Capacity **290 m³/min** Stroke **✓** Driven by **Main engine**
Auxiliary Engines crank shafts, diameter **150 mm** Position **One 3 cyl. engine / One 2 cyl. engine / machinery**
as fitted **150 mm** **flat side / abd side / space**
Have the Auxiliary Engines been constructed under special survey **Yes** Is reports sent herewith **Yes**

AIR RECEIVERS:—Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Injection Air Receivers, No.

Seamless, lap welded or riveted longitudinal joint

Starting Air Receivers, No.

Seamless, lap welded or riveted longitudinal joint

IS A DONKEY BOILER FITTED?

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

PLANS. Are approved plans forwarded herewith for Shafting

Donkey Boilers

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description,

Eriksbergs Mek. Verkstads Aktiebolag

Manufacturer.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

Feb. 2. 14. 22. March 2. 3. 10. 15. April 19. 27. 28. May 4. 7. 9. 16. 18. 19. 21. 23. 31. June 7. 9. 16. 30. July 1. 5. 8. 12. 16. 19. 27. 28. 29. Aug. 2. 4. 10. 11. 12. 13. 16. 17. 19. 22. 29. Sept. 1. 1. 2. 7. 8. 9. 13. 15. 17. 19. 20. 23. 24. 27. Oct. 4. 6. 8. 11. 12. 14. 19. 20. 22. 25. 27. 31. Nov. 1. 2. 7. 11. 11. 12. 12. 14. 15.

Dates of Examination of principal parts—Cylinders 10.8.38. Covers 10.8.38. Pistons 13.8.38. Rods 13.8.38. Connecting rods 28.9.38. Tube shaft 19mm.

Crank shaft 2.8.38. Flywheel shaft 2.8.38. Thrust shaft 2.8.38. Intermediate shafts 7.9.38. Engines holding down bolts 15.11.38.

Screw shaft 7.9.38. Propeller 7.9.38. Stern tube 13.9.38. Engine seatings 12.11.38. Engines tried under working conditions 15.11.38.

Completion of fitting sea connections 13.9.38. Completion of pumping arrangements 12.11.38.

Crank shaft, Material M-steel Identification Mark LLOYD'S 1180-1181 TW 8.7.38 Flywheel shaft, Material M-steel Identification Mark LLOYD'S 1182 TW 8.7.38

Thrust shaft, Material M-steel Identification Mark LLOYD'S 1182 TW 8.7.38 Intermediate shafts, Material M-steel Identification Mark LLOYD'S 1182 TW 8.7.38

Tube shaft, Material M-steel Identification Mark LLOYD'S 1182 TW 8.7.38 Screw shaft, Material M-steel Identification Mark LLOYD'S 1182 TW 8.7.38

Identification Marks on Air Receivers

Nos 425-426 LLOYD'S TEST 40Kg WP 25Kg S.A 16.7.38.

LLOYD'S TEST 80 ATM VS 1544 WP 40 ATM 14.4.38 1/2.

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 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

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

The main and auxiliary engines of this vessel have been complied with the requirements of the Rules. The shafting as per forged material is attached. Test sheets of donkey boiler and starting air receiver material are also attached. The workmanship is good and the materials fulfill the requirements of the Rules. The dimensions are as specified and in accordance with the Rules and approved plans. The auxiliary machinery consist of one 2-cylinder and one 3-cylinder 2 stroke cycle, single acting diesel oil engine of 220 mm diameter and 370 mm stroke, manufactured by Eriksbergs M.V. AB of this port, making dynamos of 100 and 82 kW. (See separate reports now sent). The auxiliary engines have been tested under working conditions on a trial ship and found to work satisfactorily.

The machinery of this vessel is eligible in our opinion to be classed in the Register Book of this Society.

notation of LMC 11.38. Working pressure of donkey boilers 142 lbs/sq.

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

START. AIR RECEIVER FEE

Committee's Minute

Assigned

When applied for,

22nd Nov 1938

When received,

12/12/38

TUE 29 NOV 1938

Oil Eng.

CL

Engineer Surveyor to Lloyd's Register of

L. Appelien



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