

# REPORT ON OIL ENGINE MACHINERY.

No. 12333

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Date of writing Report 28<sup>th</sup> April 39 When handed in at Local Office 29<sup>th</sup> April 39 Port of GOTHENBURG

No. in Survey held at GOTHENBURG Date First Survey 19<sup>th</sup> Nov. 1938 Last Survey 18<sup>th</sup> April 1939

Reg. Book Supplement Single on the Proton Triple Screw vessel M/S BRITAMSEA GOTHENBURG By whom built A.B. GÖTAVERKEN Yard No. 533 When built 1939

Tons Gross 8237.20 Net 4929.4

made at GOTHENBURG By whom made A.B. GÖTAVERKEN Engine No. 1342 When made 1939

Boilers made at GOTHENBURG By whom made A.B. GÖTAVERKEN Boiler No. When made 1939

Horse Power 3610 Owners SKIBS P/S CANADA TANK Port belonging to OSLO

Horse Power as per Rule 653 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

For which vessel is intended GENERAL

ENGINES, &c. Type of Engines Heavy Oil Engine 2 or 4 stroke cycle 4 Single or double acting S/A

Pressure in cylinders 45 lbs/sq. in. Diameter of cylinders 740 mm (29 1/8") Length of stroke 500 mm (19 3/4") No. of cylinders 8 No. of cranks 8

Rated Pressure 7.75 lbs/sq. in. Rings, adjacent to the Crank, measured from inner edge to inner edge 1004 mm Is there a bearing between each crank Yes

Revolutions per minute 110 Flywheel dia. None Weight Means of ignition Compression Kind of fuel used Diesel Oil

Journal diam. of journals 488 mm Crank pin dia. 488 mm Crank Webs Mid. length breadth shrunk Thickness parallel to axis 310 mm  
Solid forged as per Rule 488 mm Central holes shrunk Thickness around eye-holes 217.5 mm 215  
Semi built as fitted 488 mm  
All built as fitted 488 mm

Shaft, diameter as per Rule 360 mm Intermediate Shafts, diameter as fitted 360 mm Thrust Shaft, diameter at collars as fitted 375 mm

Propeller shaft, diameter as per Rule 390 mm Screw Shaft, diameter as fitted 405-7 mm Is the tube shaft fitted with a continuous liner Yes

Bushers, thickness in way of bushes as per Rule 19 mm Thickness between bushes as per Rule 14.5 mm Is the after end of the liner made watertight in the 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 liners do 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 Fits tightly

If so, state type Oil Gland Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes

Length of Bearing in Stern Bush next to and supporting propeller 1560 mm

Pitch 3615 mm No. of blades 4 Material Brass whether Moveable No Total Developed Surface 2.44 sq. feet

Reversing Engines with comp. air Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched Yes Means of lubrication oil

Thickness of cylinder liners 32 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with 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 led to a funnel

Bilge Pumps, No. Two - 200 ton/hour each Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

worked from the Main Engines, No. 1 Diameter 150 mm Stroke 250 mm Can one be overhauled while the other is at work Yes

led to the Main Bilge Line No. and Size One ballast pump 100 t/h | One plunger 30 t/h | One plunger 20 t/h How driven Steam | Steam | Main engine

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

Oil Pumps, No. and size One 100 ton/hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two - 1667 lit./hr. each

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

Size:—In Machinery Spaces Three - 3 1/2"; Two - 2 1/2"; One - 2 1/2" from coffee room In Pump Room Two - 2 1/2"

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

Are the Bilge Suctions in the Machinery Spaces accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

Connections fitted direct on the skin of the ship Fitted on coal iron stands Are they fitted with Valves or Cocks Yes

Are the Overboard Discharges above or below the deep water line Above

Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

How are they protected through the bunkers No coal bunkers

Have they been tested as per Rule Yes

Are the connections accessible at all times Yes

Is the Shaft Tunnel watertight No tunnel Is it fitted with a watertight door Yes

What means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Compressors, No. None No. of stages 2 Diameters 232-90 mm Stroke 220 mm Driven by Aut. oil engine

Small Auxiliary Air Compressor, No. One No. of stages 2 Diameters 320-280 mm Stroke 150 mm Driven by Steam engine

What provision is made for first Charging the Air Receivers The steam driven main engine compressor

Scavenging Air Pumps, No. None Diameter None Stroke None Driven by None

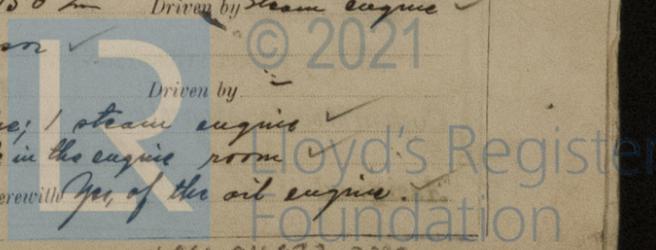
Auxiliary Engines crank shafts, diameter as per Rule 150 mm No. 1 aut. oil engine; 1 steam engine Position On port side in the engine room

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes, of the oil engine



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AIR RECEIVERS:—Have they been made under survey *Yes* State No. of Report or Certificate *439-440*

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 *—*

Starting Air Receivers, No. *2* Total cubic capacity *2 x 13.5 = 27 cu* Internal diameter *1850 x 1800* thickness *25.5 x 25*

Seamless, lap welded or riveted longitudinal joint *Riveted* Material *S.M. Steel* Range of tensile strength *46.1-48.8* Working pressure *27 by rule 25 by rule*

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 *8/6 & 7/2 37* Receivers *9.8.37* Separate Fuel Tanks *6.1.39*

Donkey Boilers *27.5.38* General Pumping Arrangements *9.8.37* Pumping Arrangements in Machinery Space *9.8.37*

Oil Fuel Burning Arrangements *—*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied *For the main engine: 2 fuel needle valves, 6 exhaust valves, 6 piston rings, 1 telescopic cooling pipe with flange, 1 fuel oil pump with links, 1 top half of crank pin bushes, 2 halves of main bearing bushes, 1 propeller shaft with nut and 1 cast iron propeller*

The foregoing is a correct description,

*W. J. J. J.*  
*W. J. J. J.*

Manufacturer.

Dates of Survey while building: During progress of work in shops—*1938. Oct. 17, 27. Nov. 19, 22, 23, 24, 25. Dec. 6, 14, 15, 16, 19, 20, 22, 30. 1939. Jan. 3, 5, 9, 11, 13, 14, 17, 18, 21, 26. Feb. 4, 7, 11, 13, 14, 15, 16, 17, 22, 25, 28. March 3, 6, 7, 10, 17, 20, 21, 22, 24, 27, 28, 29, 30, 31. April 1, 4, 6, 11, 12.*  
During erection on board vessel—*1939. March 3, 17, 28, 31. April 1, 11, 12, 13, 14, 15, 18.*  
Total No. of visits *67.*

Dates of Examination of principal parts—Cylinders *13-15/2 39* Covers *13-15/2 39* Pistons *3/1 39* Rods *4/1 39* Connecting rods *4/1 39*

Crank shaft *1/2 38, 1 1/2 38* Flywheel shaft *—* Thrust shaft *2/1.1 39* Intermediate shafts *16.2.39* Tube shaft *—*

Screw shaft *3.3.39* Propeller *3.3.39* Stern tube *3.3.39* Engine seatings *25.2.39* Engines holding down bolts *10/3 39*

Completion of fitting sea connections *3.3.39* Completion of pumping arrangements *—* Engines tried under working conditions *24/3 39*

Crank shaft, Material *S.M. Steel* Identification Mark *LLOYD'S No. 2885/6 H.2.6.12.38* Flywheel shaft, Material *—* Identification Mark *—*

Thrust shaft, Material *S.M. Steel* Identification Mark *LLOYD'S No. 4831 \$ 2.1.39* Intermediate shafts, Material *S.M. Steel* Identification Marks *LLOYD'S No. 2866 \$ 16.2.39*

Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *S.M. Steel* Identification Mark *LLOYD'S No. 49340 \$ 3.3.39*

Identification Marks on Air Receivers *No. 439-440 LLOYD'S TEST 40N6 W.P. 25 PSI \$ 7.5.39*

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 *No*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel. *"ALBERT L. ELLSWORTH" Later yard No. 504.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The main and auxiliary machinery of this vessel has been built under special survey and all the requirements of the Rules have been complied with. The shafting as per forging report attached. 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. The auxiliary machinery consists of one 3-cylinder 45CSA diesel oil engine having a cylinder diameter of 240" and 360" stroke manufactured by Messrs. W.B. Lister & Co. and one compound steam engine having cylinder diameters of 12" & 16" and 7" stroke manufactured by Messrs. B. Radcliff & Sons Ltd, Nottingham, each working a generator of 25 kw. The main and auxiliary engines have been tested on a trial trip and found to work satisfactorily. The machinery of this vessel is eligible in my opinion to be classed in the Register Book with notation of LMC 4.39 (Working pressure of Drury boilers 150 LBS/D)*

The amount of Entry Fee *NR* : 114.00 When applied for, *29th April, 1939.*  
Special *NR* : 2045.35  
Donkey Boiler Fee *NR* : 159.60 When received, *16.5.1939*  
Travelling Expenses (if any) £ *—*

*Steu. Jolsson*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *+ Lmb. 4.39 Oil Eng*  
*2 D.B. - 150th*

FRI 5 MAY 1939



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