

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 17082.

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Date of writing Report 15th Nov. 1949. When handed in at Local Office 24th Nov. 1949. Port of Gothenburg.  
No. in Survey held at Gothenburg Date, First Survey 11th April Last Survey 3rd November 1949.  
Reg. Book. Number of Visits 61

35473 on the ~~XXXXX~~ Single Screw vessel "ANGLO MAERSK" Tons Gross 11647 Net 6825  
Built at Gothenburg By whom built Eriksbergs Mek. Verkstads A-B. Yard No. 388 When built 1949  
Engines made at Gothenburg By whom made Eriksbergs Mek. Verkstads A-B. Engine No. 488 When made 1949  
Donkey Boilers made at Glasgow By whom made Barclay, Curle & Co., Ltd. Boiler No. 50417 When made 1949  
Brake Horse Power 7380 Owners A/S D/S Svendborg & D/S af 1912 A/S Port belonging to Copenhagen  
Nom. Horse Power as per Rule 1440 = MN Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
Trade for which vessel is intended General

IL ENGINES, &c. —Type of Engines Heavy oil, B & W, crosshead type 2 or 4 stroke cycle 2 Single or double acting Single  
Maximum pressure in cylinders 48 kg/mm<sup>2</sup> (29.1/8") (55.1/8")  
Mean Indicated Pressure 6.5 kg/cm<sup>2</sup> Diameter of cylinders 740 mm Length of stroke 1400 mm No. of cylinders 9 No. of cranks 9  
Span of bearings, adjacent to the crank, measured from inner edge to inner edge 948 mm Is there a bearing between each crank Yes  
Revolutions per minute 115 Moment of inertia of flywheel (Kgm<sup>2</sup>) 5260  
Flywheel dia. 1975 mm Weight 2500 kgs Means of ignition Compression Kind of fuel used Diesel oil  
Crank Shaft, ~~XXXXXX~~ as fitted 520 mm. Crank pin dia. 520 mm. Crank webs Mid. length breadth --- Thickness parallel to axis 270 mm.  
All built as fitted 520 mm. Mid. length thickness --- shrunk Thickness around eye-hole 295 mm.  
Flywheel Shaft, diameter as per Rule --- Intermediate Shafts, diameter as fitted 410 mm Thrust Shaft, diameter at collars as fitted 500 mm.  
Tube Shaft, diameter as fitted --- Screw Shaft, diameter as fitted 467 mm Is the ~~XXXX~~ shaft fitted with a continuous liner Yes  
Bronze Liners, thickness in way of bushes as fitted 22 mm Thickness between bushes as fitted 22 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 In one length  
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 tightly  
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 tube shaft No  
If so, state type --- Length of bearing in Stern Bush next to and supporting propeller 2053 mm.  
Propeller, dia. 17' 9" Pitch 14' 1.14" No. of blades 4 Material Bronze whether moveable No Total developed surface 130 sq. feet  
Moment of inertia of propeller (Kgm<sup>2</sup>) 91000 Kind of damper fitted None fitted  
Method of reversing Engines Compr. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced Thickness of cylinder liners 52 mm Are the cylinders fitted with safety valves --- 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  
Led to a funnel Cooling Water Pumps, No. 4 2 salt: 1027 GMP, 1 salt or fresh: 920 GMP, 1 fresh: 920 GMP Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
Bilge Pumps worked from the Main Engines, No. 1 Diameter 150 mm. Stroke 200 mm. Can one be overhauled while the other is at work ---  
Pumps connected to the Main Bilge Line { No. and size 1 á 20 tons per hour. 1 á 40 tons per hour. 1 ballast á 150 tons per hour.  
How driven From main engine Steam engine 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 ---  
Ballast Pumps, No. and size 1 á 150 tons/hour Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 315 l<sup>3</sup>/hour  
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 3 x 4", 1 x 2 1/2" main In pump room 2 x 4"  
forward pump room: 1 x 2 1/2", 2 x 2 1/2" from dry cargo hold  
Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2 x 4", 1 x 6"  
Are all the bilge suction pipes in hold/cargo hold fitted with strum-boxes Yes Are the bilge suction pipes 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 Not all Are they fitted with valves or cocks Yes Are they fixed  
efficiently 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  
That pipes pass through the bunkers No coal bunkers How are they protected ---  
That pipes pass through the deep tanks Bilge suction pipe from coffer Have they been tested as per Rule Yes  
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. None No. of stages --- diameters --- stroke --- driven by ---  
Auxiliary Air Compressors, No. 2 No. of stages 2 diameter 4.3/4" - 11.1/4" stroke 8" driven by Electrically  
Small Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 3.1/8" - 7.1/4" stroke 4 1/2" driven by Steam eng.  
What provision is made for first charging the air receivers The above steam engine driven compressors  
Scavenging Air Pumps, No. 2 Rotary type stroke --- driven by Main engine  
Auxiliary Engines crank shafts, diameter as fitted 180 mm No. 2 Position ER floor, port side, fore and aft.  
Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Copenhagen report 12789.

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AIR RECEIVERS:—Have they been made under survey... Yes ✓ State No. of receivers 2099 - 2100  
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. 2 ✓ Total cubic capacity 11.5 M<sup>3</sup> Internal diameter 1746 mm. thickness 27 mm.  
Seamless, lap welded or riveted longitudinal joint... El. welded Material S.M. Steel Range of tensile strength 45-48 kg/mm<sup>2</sup> Working pressure 25.2 kg/cm<sup>2</sup>  
IS A DONKEY BOILER FITTED Yes ✓ If so, is a report now forwarded Yes. See also Glasgow First Entry Report No. 73

IS A DONKEY BOILER FITTED Yes ✓ If so, is a report now forwarded Yes. See also Glasgow First Entry Report No. 73  
Is the donkey boiler intended to be used for domestic purposes only... No ✓  
PLANS. Are approved plans forwarded herewith for shafting London 17/1 1949 Receivers London 13/8 1947 Separate fuel tanks...  
Donkey boilers... General pumping arrangements 30/12 1947 Pumping arrangements in machinery space London 30/12 1947  
Oil fuel burning arrangements London 28/1 1949 Torsional Vibration Characteristics approved in London on the 18/1 1949  
SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes ✓  
State the principal additional spare gear supplied 1 propeller shaft, 2 cylinder liners, 2 cylinder heads, 1 piston, 1 piston with rod, 8 exhaust valves.  
The foregoing is a correct description, and the particulars of the installation as fitted are as approved for torsional vibration characteristics.

ERIKSBERGS MEK. VERKSTADS A-B.

*Anders Sjögren*

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 11th April - 21st September, 1949.  
During erection on board vessel - 19th August - 3rd November, 1949.  
Total No. of visits 61.

Dates of examination of principal parts—Cylinders 20-21/6.49 Covers 10-11/6 1949 Pistons 1-3/6 1949 Rods 1-6-17/5.49 Connecting rods 16/5 1949  
Crank shaft 17/5 1949 Flywheel shaft... Thrust shaft 19/5 1949 Intermediate shafts 16/8 1949 Tube shaft...  
Screw shaft 31/8 1949 Propeller 31/8 1949 Stern tube 9/9 1949 Engine seatings 14/9 1949 Engine holding down bolts 14/9 1949  
Completion of fitting sea connections 25/8 1949 Completion of pumping arrangement 31/10 1949 Engines tried under working conditions 3/11 1949  
Crank shaft, material S.M. Steel Identification mark LLOYDS 154-5 SB 2.12.48 Flywheel shaft, material... Identification mark LLOYDS 156 SB 2.12.48  
Thrust shaft, material S.M. Steel Identification mark LLOYDS 156 SB 2.12.48 Intermediate shafts, material S.M. Steel Identification mark LLOYDS 113 B-n 31.8.49  
Tube shaft, material... Identification mark... Screw shaft, material S.M. Steel Identification mark LLOYDS 114 B-n 8.9.49  
Identification marks on air receivers. Nos. 2099 - 2100 LLOYD'S TEST 41 KGS. WP 25 KGS. SBB 22.6.49 Spare propeller shaft: LLOYDS 114 B-n 8.9.49

Welded receivers, state Makers' Name Eriksbergs Mek. Verkstads Aktiebolag, Gothenburg.  
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 ✓  
Description of fire extinguishing apparatus fitted 6 x 12 litres foam apparatus. Foam and water hoses. Steam under and foam in radius flange of Donkey Boilers.  
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Oil tanker If so, have the requirements of the Rules been complied with Not desired  
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 Yes ✓ If so, state name of vessel M/S "Peter Maersk", Got. F.E.Rpt. 166

General Remarks (State quality of workmanship, opinions as to class, &c.)  
The main engine of this vessel has been constructed under special survey in accordance with the Rules and approved plans. The workmanship and materials are good and test sheets in respect of the shafting and air receivers are attached. The machinery has been securely fitted in the vessel under my inspection and to my satisfaction and has been tested under full power conditions on a trial trip and found in order. All pumps for essential services have been examined and tested as per Rule. An exhaust gas boiler, made by Towler & Son, Ltd., as per London First Entry Report No. 117192 has been fitted on board and its safety valves adjusted under steam to 150 lbs. per square inch.  
The machinery of this vessel is eligible, in my opinion, to be classed +LMC 11.49. Tail shaft fitted with Continuous Liner. Working pressure of oil fired donkey boiler 143 lbs. per square inch, and working pressure of exhaust gas heated boiler 150 lbs. per square inch.

The amount of Entry Fee ... £ ... : ...  
Special ... Kr. 5740:00 : When applied for 24th Nov. 1949.  
Air Receiver ... Kr. 300:00 : When received ... 19 ...  
Travelling Expenses (if any) £ ... : ...  
TUES. 20 DEC 1949

Committee's Minute  
Assigned + LMC 11.49 Oil Eng  
2 D.B. 143 lb C.L.

*Anders Sjögren*  
Engineer Surveyor to Lloyd's Register of Shipping



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