

# REPORT ON OIL ENGINE MACHINERY.

No. 94350.  
29 SEP 1928

Received at London Office

Date of writing Report Sept 17<sup>th</sup> 1928 When handed in at Local Office 24 SEP. 1928 Port of LIVERPOOL

No. in Survey held at Queensferry (Chester) Date, First Survey July 11<sup>th</sup> /28 Last Survey Sept 15<sup>th</sup> 1928  
Reg. Book. 84963 Number of Visits 11

84963 on the Single Twin Triple Quadruple Screw vessel "Energie" Tons Gross 433 Net 225

Built at Queensferry By whom built Abdela Mitchell (1925) Ltd Yard No. 535 When built 1928  
Engines made at Cologne - Datz By whom made Motorenfabrik Datz A.G. Engine No. 205195 When made 1928  
Donkey Boilers made at ✓ By whom made ✓ Boiler No. 120 When made ✓  
Brake Horse Power 400 (total) Owners Medway oil & storage Ltd Port belonging to Rochester  
Nom. Horse Power as per Rule 114 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes  
Trade for which vessel is intended ✓

OIL ENGINES, &c.—Type of Engines Heavy oil Engine - turn screw, 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 40 kg/cm<sup>2</sup> Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders 8 (total) No. of cranks 8 (total)

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge ✓ Is there a bearing between each crank ✓  
Revolutions per minute 300 Flywheel dia. ✓ Weight ✓ Means of ignition ✓ Kind of fuel used ✓

Crank Shaft, dia. of journals as per Rule Crank pin dia. as per Rule Crank Webs as per Rule Mid. length breadth as per Rule Thickness parallel to axis shrunk  
as fitted ✓ as fitted ✓ as fitted ✓ as fitted ✓ Thickness around eyehole as fitted

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule  
as fitted ✓ as fitted ✓ as fitted ✓

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube screw shaft fitted with a continuous liner no. (short lines in way of A brackets)  
as fitted None as fitted 110 mm as fitted ✓

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the propeller boss Yes  
as fitted 7/16" as fitted ✓

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 no. Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no. Length of Bearing in Stern Bush next to and supporting propeller 1'-8 1/4"

Propeller, dia. 5'-4 1/4" Pitch see Dusseldorf Report No. of blades 3 Material bronz whether Moveable no Total Developed Surface ✓ sq. feet  
Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication ✓

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Inch up funnel

Cooling Water Pumps, No. one each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓  
Bilge Pumps worked from the Main Engines, No. one Diameter 75 mm Stroke 70 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size one, Centrifugal pump, 3166 litres per hour capacity (Slaps 24.60 - 6.1.28)  
How driven 7 HP crude oil engine

Ballast Pumps, No. and size one Centry supplied Lubricating Oil Pumps, including Spare Pump, No. and size ✓  
Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces Two - 2" dia

In Holds, &c. off peak - one 2" dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one - 2 1/2" dia

Are all the Bilge Suction pipes in Holds 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 Yes Are they fitted with Valves or Cocks both  
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 ✓

What pipes pass through the bunkers none 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 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 per set No. of stages two Diameters 115 x 135 mm Stroke 70 mm Driven by Main Engines

Auxiliary Air Compressors, No. one No. of stages two Supplied from Datz, marked 115 x 135 mm. 6.1.28 Driven by 7 HP engine

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

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule ✓  
as fitted ✓

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓  
Can the internal surfaces of the receivers be examined ✓ What means are provided for cleaning their inner surfaces ✓

Is there a drain arrangement fitted at the lowest part of each receiver ✓  
High Pressure 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. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength ✓ Working pressure by Rules ✓



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *13.1.28*  
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements *yes*

Oil Fuel Burning Arrangements

SPARE GEAR *as per Rules & Dussel's Rpt N° 8. verified on board.*

The foregoing is a correct description,

Misses J. J. Abdula & Mitchell (1925) Ltd

*L. L. Slater* manager

Manufacturer.

Dates of Survey while building  
During progress of work in shops - -   
During erection on board vessel - - *1925 July 11, 16, 18, Aug 7, 24, 31, Sept 3, 10, 12, 14, 15.*  
Total No. of visits *11.*

Dates of Examination of principal parts—Cylinders  Covers  Pistons  Rods  Connecting rods   
Crank shaft  Flywheel shaft  Thrust shaft  Intermediate shafts  Tube shaft   
Screw shaft *18.7.28* Propeller *18.7.28* Stern tube *11.7.28* Engine seatings *11.7.28* Engines holding down bolts *17.8.28*  
Completion of fitting sea connections *18.7.28* Completion of pumping arrangements *3.9.28* Engines tried under working conditions *10.9.28*  
Crank shaft, Material  Identification Mark  Flywheel shaft, Material  Identification Mark   
Thrust shaft, Material  Identification Mark  Intermediate shafts, Material  Identification Marks   
Tube shaft, Material  Identification Mark  Screw shaft, Material *steel* Identification Mark *2412/2413 10.12.28*

Is the flash point of the oil to be used over 150° F. *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 Machinery has been fitted on board in a satisfactory manner & in accordance with the Rules and approved plans. Upon completion it was examined under full working conditions during trial and found satisfactory, and is now, in my opinion eligible for record of + LMC 9.28 in Register book.*

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

The amount of Entry Fee ... £ *Def Report*  
Special *pat fee* ... £ *5.14.0* When applied for, *See letter to*  
Donkey Boiler Fee ... £ : : When received, *22.12.27*  
Travelling Expenses (if any) £ *1.18.6*

Committee's Minute *LIVERPOOL 28 SEP. 1928*

Assigned *+ LMC. 9.28.*

*J. J. Milton & A. R. Howell*  
Engineer Surveyor to Lloyd's Register of Shipping.



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