

List of

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

No. 86364

Received at London Office

25 OCT 1930

Date of writing Report

10 When handed in at Local Office

23/10/30 Port of Newcastle-on-Tyne.

No. in Survey held at Walker

Date, First Survey 24 Oct 129 Last Survey 15 Oct 1930

Reg. Book.

Number of Visits 86.

Single
on the
Triple
Screw vessel

Motor Vessel "MORGENEN."

Tons } Gross 7093
Net 4288

built at Walker. By whom built Swan Hunter, W R & Co. Ward No. 1384 When built 1930

Engines made at Walker. By whom made - do - Engine No. " When made "

Monkey Boilers made at Walker By whom made - do - Boiler No. " When made "

Indicated Horse Power 727 Owners A/M. Tanktranspols Port belonging to Gausborg.

Net Horse Power as per Rule 425 Is Refrigerating Machinery fitted for cargo purposes 70 Is Electric Light fitted yes.

Use made for which vessel is intended Oil Barrier. 26 3/8" - 49 5/8"

ENGINES, &c.—Type of Engines Napline Atlas Polar. 2 or 4 stroke cycle 2 Single or double acting Single.

Maximum pressure in cylinders 500 lbs. Diameter of cylinders 640 mm. Length of stroke 1260 mm. No. of cylinders 6 No. of cranks 6.

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge 946 mm. Is there a bearing between each crank yes.

Revolutions per minute 98 Flywheel dia. 2140 mm. Weight 8.8 Tons Means of ignition Air Kind of fuel used Fuel Oil.

Crank Shaft, dia. of journals as per Rule 440 mm. Crank pin dia. 455 mm. Crank Webs Mid. length breadth 450 mm. Thickness parallel to axis 288 mm.

(BUILT) as fitted 455 mm. Mid. length thickness 288 mm. Thickness around eye-hole 204 mm.

Wheel Shaft, diameter as per Rule 440 mm. Intermediate Shafts, diameter as per Rule 1324 mm. Thrust Shaft, diameter at collars as per Rule 440 mm.

as fitted 455 mm. as fitted 1396 mm. as fitted 455 mm.

Propeller Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule 1461 mm. Is the shaft fitted with a continuous liner yes.

as fitted - as fitted 1510 mm.

Oil Liners, thickness in way of bushes as per Rule 75.48 mm. Thickness between bushes as per rule 562 mm. Is the after end of the liner made watertight in the peller boss yes.

as fitted 13/16 13/16 as fitted 145 mm.

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -

Does the liner 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 -

Are 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 -

Length of Bearing in Stern Bush next to and supporting propeller 60 1/2"

Propeller, dia. 16'-0" Pitch 13'-6" No. of blades 4 Material Bronze whether Moveable 70 Total Developed Surface 85 sq. feet

Method of reversing Engines Air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication used Thickness of cylinder liners 45 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 -

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

Engine Pumps worked from the Main Engines, No. 2 Diameter 264 mm. Stroke 460 mm. Can one be overhauled while the other is at work yes.

Pumps connected to the Main Bilge Line No. and Size 8 - 9x10x10 - 8x8x10 - 6x6x6 How driven Steam

Fast Pumps, No. and size 1 - 9x10x10 Lubricating Oil Pumps, including Spare Pump, No. and size 2 D.F. 168 mm x 140 mm

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 - 3"

Holds, &c. 2 - 2 1/2 in forward Hold.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 6"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces 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 fired 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 yes.

Do all pipes pass through the bunkers - How are they protected -

Do all 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 - Is it fitted with a watertight door - worked from -

For 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. 6 No. of stages 4 Diameters H.P. 170 L.P. 650 Stroke 980 x 420 Driven by Main engine

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters 12.45 Stroke 4 Driven by Steam

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

Revolving Air Pumps, No. 4 Diameter 6-640 Stroke 1260 x 880 Driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule } See attached report.

as fitted }

AIR RECEIVERS:—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 yes What means are provided for cleaning their inner surfaces Manholes.

Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. 3 Cubic capacity of each 13.45 Internal diameter 450 mm thickness 2 1/4 in.

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 32/38 Tons Working pressure by Rules 1520 lbs. sq. in.

Starting Air Receivers, No. 2 Total cubic capacity 14000 cu. ft. Internal diameter 5-6 7/8 in Mean thickness 5/8 in

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 30/34 Tons Working pressure by Rules 225 lbs. sq. in.

003131-003137-0097

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

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

Receivers *yes*

Separate Tanks *yes*

Donkey Boilers *yes*

General Pumping Arrangements *yes*

Oil Fuel Burning Arrangements *yes*

SPARE GEAR

as per Society Rules & attached List

The foregoing is a correct description,

G. J. Jewery Manufacturer.

Dates of Survey	1929	1930
During progress of work in shops--	Oct. 24 Dec. 12. 19. Jan. 13. 20. 22. 24. 27. 29.	Feb. 3. 5. 7. 10. 14. 17. 19. 21. 25. Mar. 4. 6. 7. 10. 11. 12. 13. 24. 26. 28.
During erection on board vessel--	Apr. 4. 7. 17. 22. 25. May 5. 6. 7. 8. 12. 21. 22. 26. 28. 30.	June 2. 6. 10. 11. 12. 13. 14. 16. 17. 18. 20. July 2. 4. 9. 11. 14. 15. 17. 21. 22. 23. 28. 29.
Total No. of visits	86.	

Dates of Examination of principal parts—Cylinders *13. 6. 30* Covers *13. 6. 30* Pistons *13. 6. 30* Rods *13. 6. 30* Connecting rods *13. 6. 30*

Crank shaft *3. 5. 30* Flywheel shaft *3. 5. 30* Thrust shaft *3. 5. 30* Intermediate shafts *3. 5. 30* Tube shaft —

Screw shaft *3. 5. 30* Propeller *10. 6. 30* Stern tube *10. 6. 30* Engine seatings *12. 6. 30* Engines holding down bolts *6. 10. 30*

Completion of fitting sea connections *10. 6. 30* Completion of pumping arrangements *15. 10. 30* Engines tried under working conditions *17. 10. 30*

Crank shaft, Material *Steel* Identification Mark *N 3145* Flywheel shaft, Material *Steel* Identification Mark *3. 5. 30*

Thrust shaft, Material *Steel* Identification Mark *3. 5. 30* Intermediate shafts, Material *Steel* Identification Marks *3. 5. 30*

Tube shaft, Material — Identification Mark — Screw shaft, Material *Steel* Identification Mark *3. 5. 30*

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 —

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 Machinery has been built under special survey in accordance with the Rules of the Society, the approved plans, has been securely fitted on board the vessel, tried under full working conditions, found satisfactory. The materials, workmanship are of good quality throughout. This vessel is eligible, in my opinion, to have notation F.L.M.C. 10.30. & T. B. C.L. in the Register Books.*

It is submitted that this vessel is eligible for THE RECORD, F.L.M.C. 10.30 C.L. Oil Engines 2.5 C.S.A. 6cy. 26 3/8" - 49 5/8" N.H.P. 72 2DB 150lb.

The amount of Entry Fee ... £ 6 : -
Special ... £ 111 : 5
Donkey Boiler Fee ... £ 25 : 4
Travelling Expenses (if any) ... £ 8 : 8

When applied for, *24 OCT 1930*
When received, *27. 10. 30*

Wm. A. Ferguson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 31 OCT 1930*
Assigned *+ L.M.C. 10.30 Oil Eng. 2DB 150lb. C.L.*



Newcastle-on-Tyne

The Surveyors are requested not to write on or below the space for Committee's Minute.

CERTIFICATE WRITTEN