

REPORT ON OIL ENGINE MACHINERY.

No. 19326

Received at London Office

10 JUN 1931

Date of writing Report 24.2.31 When handed in at Local Office 3rd JUNE 1931 Port of Greenock

No. in Survey held at Greenock Date, First Survey 24th MARCH 1930 Last Survey 1st JUNE 1931
Reg. Book. Number of Visits 65

on the Single Triple Screw vessel S/S "Permian" Tons Gross 8951.42
Net 5444.34

Built at Greenock By whom built Scotts & Co Ltd Yard No. 557 When built 1931
Engines made at Greenock By whom made Societe d'Electricite de Niagara Engine No. 4219 When made 1931
Monkey Boilers made at Greenock By whom made Scotts & Co Ltd Boiler No. 623 When made 1931
Horse Power 3000 Owners The Atlantic Oil Shipping Co Ltd Port belonging to Panama
Horse Power as per Rule 888 Is Refrigerating Machinery fitted for cargo purposes 770 Is Electric Light fitted Yes
Trade for which vessel is intended Foreign

ENGINES, &c.—Type of Engines 4 Magnificent Rapid, Corel Diesel Engines Committed to Main Generator on Propelling Shaft or 4 stroke cycle Single or double acting

Maximum pressure in cylinders _____ Diameter of cylinders _____ Length of stroke _____ No. of cylinders _____ No. of cranks _____
Position of bearings, adjacent to the Crank, measured from inner edge to inner edge _____ bearing between each crank _____

Revolutions per minute _____ Flywheel dia. _____ Weight 1450H not attached Kind of fuel used Diesel
Crank Shaft, dia. of journals _____ as per Rule _____ Crank Webs _____ Mid. length breadth _____ Thickness parallel to axis _____
_____ as fitted _____ Mid. length thickness _____ shrunken _____ Thickness around eye-hole _____

Propeller Shaft, diameter _____ as fitted _____ Intermediate Shafts, diameter _____ as per Rule _____ as fitted _____ Thrust Shaft, diameter at collars _____ as fitted _____
Main Shaft, diameter _____ as per Rule _____ as fitted _____ Screw Shaft, diameter _____ as fitted _____ Is the not screw shaft fitted with a continuous liner Yes

Cylinder Liners, thickness in way of bushes _____ as per Rule 3/4" Thickness between bushes _____ as per rule 1/2" Is the after end of the liner made watertight in the
peller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes

Does 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 Yes
If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes

Propeller, dia. 16.6" Pitch 11.8 3/4" No. of blades 4 Material Bronze whether Moveable Yes Total Developed Surface 82 sq. feet
Method of reversing Motor Electric Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication Yes

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

Boiling Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
Suction Pumps worked from the Main Engines, No. None Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____

Bilge Pumps connected to the Main Bilge Line { No. and Size 4 (3 at 450 Gall per min / one at 325 Gall per min) How driven Motor

Oil Pumps, No. and size one 325 Gall per min Lubricating Oil Pumps, including Spare Pump, No. and size one on each engine (4)
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 at 450 Gall / one at 325 Gall per min

Total, &c. 2. 3" Pump Room For 1. 2 1/2" aft. 2. 2" Tanks 1. 8' in each.
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 at 6"

Are all the Bilge Suction pipes in Holds and Funnel 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 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 Yes
Do pipes pass through the bunkers _____ How are they protected _____
Do pipes pass through the deep tanks None 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
department to another Yes Is the Shaft Tunnel watertight None Is it fitted with a watertight door _____ worked from _____

Is the vessel a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork _____
Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____
Auxiliary Air Compressors, No. Two No. of stages 2 Diameters 5 1/2" & 2 3/4" Stroke 5 Driven by Motor
Auxiliary Air Compressors, No. one No. of stages one Diameters FREE AIR Stroke 4 Driven by Hand

Engining Air Pumps, No. _____ Diameter _____ Stroke _____ Driven by _____
Auxiliary Engines crank shafts, diameter _____ as per Rule _____ as fitted _____

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

Is there a drain arrangement fitted at the lowest part of each receiver Yes
High Pressure Air Receivers, No. Two Cubic capacity of each 208 Internal diameter 4. 2" thickness 19/32

Seamless, lap welded or riveted longitudinal joint Riveted Material S Range of tensile strength 28-32 Working pressure by Rules 250
Low Air Receivers, No. Two Total cubic capacity 13 Cub ft Internal diameter 12" thickness 3/8"

Seamless, lap welded or riveted longitudinal joint Seamless Material S Range of tensile strength 26-30 Working pressure by Rules 250

IS A DONKEY BOILERS FITTED? *yes* If so, is a report now forwarded? *yes*
 PLANS. Are approved plans forwarded herewith for Shafting *yes* Receivers *yes* Separate Tanks *yes*
 (If not, state date of approval)
 Donkey Boilers *yes* General Pumping Arrangement *yes* Oil Fuel Burning Arrangements *yes*
 SPARE GEAR *as per Rule supplied additional. Propeller shaft.*

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY LIMITED.
 The foregoing is a correct description of the machinery.

Archd. Rennie Chief Draughtsman. Manufacturer.

Dates of Survey while building
 During progress of work in shops - (1930) Mar. 24, Apr. 3, 11, 29, May 14, 8, 15, 23, 28, June 12, 19, 24, 26, July 1, 16, 21, 28, 31, Aug. 5, 12, 14, 21, 28, Sept. 14, 8, Oct. 3, 10, 14, 15, 21, 24, Nov. 5, 6, 14, Dec. 2, 8, 16, 23.
 During erection on board vessel - (1931) Jan. 9, 13, 14, 31, Feb. 2, 3, 4, 9, 10, 18, 24, Mar. 6, 9, 11, 24, 31, Apr. 9, 14, 20, 29, May 6, 8, 13, 18, 21, 29, June 1.
 Total No. of visits 65.

Dates of Examination of principal parts - Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓
 Crank shaft ✓ Flywheel shaft ✓ Thrust shaft 23-12-30 Intermediate shafts ✓ Tube shaft ✓
 Screw shaft 23-12-30 Propeller 16-12-30 Stern tube 16-12-30 Engine seatings 13-1-31 Engines holding down bolts 2-2-31
 Completion of fitting sea connections 13-1-31 Completion of pumping arrangements 8-5-31 Engines tried under working conditions 29-5-31
 Crank shaft, Material ✓ Identification Mark ✓ Flywheel shaft, Material - Identification Mark -
 Thrust shaft, Material S Identification Mark LR. 4147 W.G.M. Intermediate shafts, Material ✓ Identification Marks ✓
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material S Identification Mark LR 4147 W.G.M.

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 *yes* If so, state name of vessel *S/S "Winkler" Ent. Reg. No. 19249*

General Remarks (State quality of workmanship, opinions as to class, &c.) *These engines (Antwerp Reg. No. 17504) and an Main Electrical Propulsion Plant (London Reg. No. C. 6318) both built under special survey & are now securely fitted on board. Good under working conditions. found satisfactory. The machinery is eligible in my opinion for the record of LMC 6.31 (Rotation of DB 25th & 140th)*

Damage caused to the Port outboard engine No. 4196-4201 in transit from agent to Liverpool in the S/S "Kilwate" of Liverpool on Jan 31 1931. 2 ribs on side of sole plate broken. 3 slightly broken. 15 brackets in way of damage. Ribs bent & broken. Repair 2 ribs clipped flush, 2 x 4 x 4" steel angles with curved plates fitted. 3 ribs dressed up. 15 brackets renewed. for further particulars see copy of Damage Report No. C 498 attached

per letter 14.9.29
 The amount of Entry Fee ... £ 125-3-10
 Special Air Renewal 6-6-
 Boiler Fee ... £ 18-18
 DAMAGE 3-3
 Travelling Expenses (if any) £
 APPLIED FOR 4/2/31
 RECEIVED 12/2/31

When applied for, 30 JUNE 1931
 When received, 30-6-31
 Wm. Gordon-Mitchell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 9-JUN 1931
 Assigned F.L.M.C. 6.31. A.B. 140.16
 CERTIFICATE WRITTEN.



Certificate (if required) to be sent to