

REPORT ON OIL ENGINE MACHINERY.

No. 87673

24 OCT 1931

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report 23/10/31 When handed in at Local Office Port of

Survey held at St. Peter's & Hebburn

Date, First Survey 3rd April 1930 Last Survey 14 Oct 1931

Number of Visits 87

on the ^{Single} Turbine ^{Triple} Screw ^{Quadruple} M. V. "Capea"

Tons { Gross 8229 Net 4826

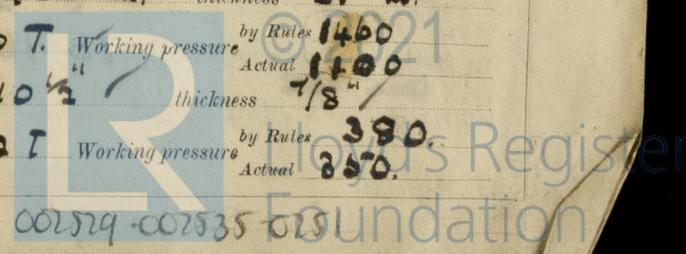
built at Hebburn By whom built Hawthorn Leslie & Co. Yard No. 580 When built 1931.
Engines made at St. Peter's By whom made Hawthorn Leslie & Co. Engine No. 3782 When made 1931.
Boilers made at St. Peter's By whom made Hawthorn Leslie & Co. Boiler No. 3782 When made 1931.
Indicated Horse Power 4000 Owners Anglo Saxon Pet. Co. Ltd. Port belonging to London.
Net Horse Power as per Rule 413.2 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Use for which vessel is intended Carrying Petroleum in Bulk.

ENGINES, &c.—Type of Engines Hawthorn Works Super or 4 stroke cycle 4 Single or double acting Single
Mean pressure in cylinders 500 lbs Diameter of cylinders 630 1/4 Length of stroke 1105 1/2 No. of cylinders 6 B.E.N.A. No. of cranks 6 E.E.V.A.
Pitch of bearings, adjacent to the Crank, measured from inner edge to inner edge 840 1/4 Is there a bearing between each crank Yes.
Revolutions per minute 135 Flywheel dia. 2200 1/4 Weight 6 Tons Means of ignition Compression Kind of fuel used Diesel Oil
Crank Shaft, dia. of journals as per Rule 398 1/4 as fitted 410 1/4 Crank pin dia. 410 1/4 Crank Webs Mid. length breadth 440 1/4 Mid. length thickness 240 1/4 Thickness parallel to axis 265 1/2 Thickness around eye hole 149 1/2
Main Shaft, diameter as per Rule 398 1/4 as fitted 410 1/4 Intermediate Shafts, diameter as per Rule 10.55 as fitted 350 1/4 Thrust Shaft, diameter at collars as per Rule 16.04 as fitted 300 1/4
Propeller Shaft, diameter as per Rule 11.63 as fitted 328 1/4 Screw Shaft, diameter as per Rule 11.63 as fitted 328 1/4 Is the tube shaft fitted with a continuous liner Yes
Liner thickness in way of bushes as per Rule .656 as fitted approved Thickness between bushes as per rule .492 as fitted 1 1/4 Is the after end of the liner made watertight in the stern tube Yes 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 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 -
If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 1600 1/4

Propeller, dia. 4050 1/2 Pitch 3150 1/2 No. of blades 3 Material N.B. whether Moveable No Total Developed Surface 53.3 sq. feet
Kind of reversing Engines Plain Air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Manual
Thickness of cylinder liners 5 1/2 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with insulating 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 &c. etc.
Suction Water Pumps, No. Two each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
Pumps worked from the Main Engines, No. 1 E.E.N.A. Diameter 150 1/4 Stroke 254 1/4 Can one be overhauled while the other is at work Yes
Pumps connected to the Main Bilge Line No. and Size 2-8 x 8 x 10 How driven Steam
Suction Pumps, No. and size 2-8 x 8 x 10 Lubricating Oil Pumps, including Spare Pump, No. and size 2 Rotary 1 Steam
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 2-3 1/2 E.R. aft. 2-3 1/2 E.R. Fo. 2-3 1/2 Cofferdam 1-5 1/2 In Pump Room 3-3-1-2
Suctions, &c. 5-2 2-2 1/2 aft. 1-4 5-2 aft. 1-5 The peak 2-2 1/2 See Plans
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-5 to 8 x 8 x 10 pumps.
Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Values
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
Are the pipes pass through the bunkers Cofferdam Suctions How are they protected -
Are the pipes pass through the deep tanks None Have they been tested as per Rule -
Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
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 -
Means provided on vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -

Air Compressors, No. 1 each engine No. of stages 3 Diameters 120, 440 Stroke 450 1/2 Driven by Main engine
Auxiliary Air Compressors, No. One No. of stages 3 Diameters 200 1/2 Stroke 450 1/2 Driven by Steam
Auxiliary Air Compressors, No. None No. of stages - Diameters - Stroke - Driven by -
Lubricating Air Pumps, No. None Diameter - Stroke - Driven by -
Main Engines crank shafts, diameter as per Rule as fitted None See Ans 1223 No. - Position -

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 and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes
Pressure Air Receivers, No. Two Cubic capacity of each 14 B.F. Internal diameter 450 1/4 thickness 2 1/4
Are they lap welded or riveted longitudinal joint Seamless Material 6 Range of tensile strength 32/36 T. Working pressure by Rules 1460 Actual 1100
Suctioning Air Receivers, No. Four Total cubic capacity 1400 Internal diameter 4-10 1/2 thickness 7/8 Working pressure by Rules 380 Actual 350
Are they lap welded or riveted longitudinal joint Riveted Material 6 Range of tensile strength 28/32 T Working pressure by Rules 380 Actual 350



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 For domestic purposes only
 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 Arrangements yes Oil Fuel Burning Arrangements yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied? yes
 State the principal additional spare gear supplied. as per lists forwarded with M/V. Caprella + M/V Bardia, + as per attached list.

The foregoing is a correct description of R. & W. HAWTHORN, LESLIE & Co. LTD.

R. B. Johnson Manufacturer.

Dates of Survey while building	1930		1931		
	During progress of work in shops	During erection on board vessel	During progress of work in shops	During erection on board vessel	
	Apr 28. 15. 28. May 7. 30. June 12. July 18. 31. Aug. 6. 11. 18. Sep. 9. 15. Oct. 7. 10. 20. 31. Nov. 4. 7. 11. 13. 14. 18.		Dec 8. 1931 Jan 7. 8. 14. 19. 26. Feb. 2. 5. 9. 18. 23. Mar. 4. 11. 16. 23. 30. Apr. 8. 15. 17. 22. 29. May 1. 7. 16. 18. 21. 28. 29. Jun 5. 12. 19. 26. Jul 3. 10. 15. 16. 17. 21. 23. 27. 28. 30. 31. Aug. 6. 22. 26. 27. Sep. 3. 9. 11. 15. 16. 22. 25. 29. Oct. 1. 5. 7. 13. 14.		
	Total No. of visits <u>87.</u>				
Dates of Examination of principal parts	Cylinders	Covers	Pistons	Rods	Connecting rods
	14. 3. 31	14. 3. 31	30. 6. 30	26. 6. 30	8. 7. 31
	1. 5. 31	1. 5. 31	8. 7. 30	16. 7. 30	16. 7. 30
Crank shaft	21. 7. 31	Thrust shaft	8. 12. 30	Intermediate shafts	14. 12. 30
Screw shaft	14. 8. 31	Propeller	14. 5. 31	Stern tube	16. 6. 31
		Engine seatings	23. 4. 31	Engines holding down bolts	24. 8. 31
Completion of fitting sea connections	16. 6. 31	Completion of pumping arrangements	24. 8. 31	Engines tried under working conditions	13. 10. 31
Crank shaft, Material	6.	Identification Mark	ad hpt.	Flywheel shaft, Material	6.
Thrust shaft, Material	6.	Identification Mark	5. 2. 8. 12. 30	Intermediate shafts, Material	6.
Tube shaft, Material	6.	Identification Mark	5. 2. 8. 12. 30	Screw shaft, Material	6.

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? -
 Is this machinery duplicate of a previous case? yes If so, state name of vessel T.M.V. Caprella, Bardia

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery has been built under special supervision in accordance with the approved plans, the Rules of the Society, and has been securely fitted on board the vessel, tried under full working conditions, and found satisfactory. The workmanship, materials are of good quality throughout. The machinery of this vessel is eligible, in my opinion to have notation T.M.C. 10.31 + S.B. 2.6.

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

The amount of Entry Fee	£ 6 : -	When applied for, 21. 10. 1931
Special	£ 110 : 13	
Donkey Boiler Fee	£ 15 : 6	When received, 23. 10. 1931
Travelling Expenses (if any)	£ 16 : 16	

Committee's Minute
 Assigned

TUE. 27 OCT 1931
 + L. Mc. 10, 31 C.L.
 Oil Eng. 2 DB. 150 lb.

Fred. A. Greenwood
 Engineer Surveyor to Lloyd's Register of Shipping.

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