

# REPORT ON OIL ENGINE MACHINERY.

No 33210

Received at London Office

-3 OCT 1941

Date of writing Report

19

When handed in at Local Office

26 Sep 1941

Port of

SUNDERLAND.

No. in Survey held at

SUNDERLAND.

Date, First Survey 26 Oct 40 Last Survey 23 Sep 1941

g. Book.

Number of Visits 34

159 on the <sup>Single</sup> ~~Triple~~ ~~Quadruple~~ Screw vessel

ST. ESSYLT

Tons Gross 5634  
Net 3308

built at Sunderland

By whom built J. L. Thompson & Sons, Ltd. Yard No. 600 When built 1941

engines made at Hawthorn

By whom made Richardson, Westgate & Co. Ltd. Engine No. 2695 When made 1941

boiler made at Auman

By whom made Cochran & Co. (Auman) Ltd. Boiler No. 14744 When made 1940

Indicated Horse Power 3200

Owners North American Steam Line, Ltd Port belonging to "Newport"

nom. Horse Power as per Rule 688

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes.

Trade for which vessel is intended General

TYPE OF ENGINES, &c. Type of Engines See N. Hawthorn Report No. 18170 2 or 4 stroke cycle — Single or double acting —

Maximum pressure in cylinders — Diameter of cylinders — Length of stroke — No. of cylinders — No. of cranks —

Mean Indicated Pressure — Is there a bearing between each crank —

Revolutions per minute 106 Flywheel dia. — Weight — Means of ignition — Kind of fuel used Heavy Oil

Crank Shaft, { Solid forged dia. of journals as per Rule — Crank pin dia. — Crank Webs Mid. length breadth — Thickness parallel to axis —  
Semi built as fitted — Mid. length thickness — shrunk Thickness around eye-hole —  
All built as fitted —

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

Propeller Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule — Is the tube shaft fitted with a continuous liner {  
as fitted — as fitted — screw }

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  
as fitted — as fitted —

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 —  
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 — Is an approved Oil Gland or other appliance fitted at the after end of the tube  
ft no If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia 16'-0" Pitch me. No. of blades 4 Material Bronze whether Moveable not Total Developed Surface 96 sq. feet

Method of reversing Engines — Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes 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  
conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine —

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

Large Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size 1. 12" x 12" Bullseye Pump, 1. 6" x 6" bilge pump, 1. 5" diam. p. for starting. Emergency  
How driven electric motor, electric motor, fuel oil engine

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

Oil Pumps, No. and size 1, 12" x 12", 35 H.P. Stu. Power Driven 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 4 at 3" dia. in Sup. Res. 1 at 2 1/2" Eng. Cofferdam. In Pump Room

Holds, &c. 3" Suctions p. S.S. in each hold, 1 at 3" Tunnel Well, 1 at 3 1/2" Tunnel Cofferdam. 2" portable, Tunnel  
dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 port, 1 Starboard at 5" dia. Emergency fuel pump.

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 yes

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 below

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 none How are they protected —

Do all pipes pass through the deep tanks Not actions 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  
apartment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from forward deck

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

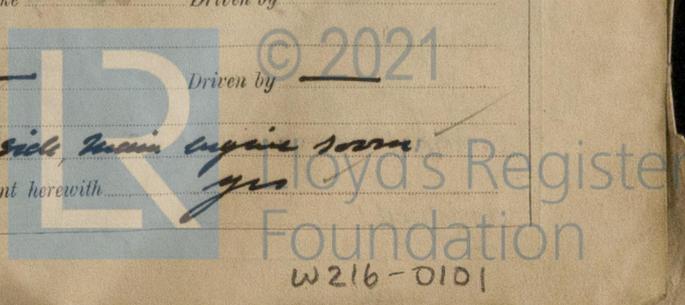
Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —

Are all Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —

Is any provision made for first Charging the Air Receivers —

Are all Auxiliary Engines crank shafts, diameter as per Rule Not attached No. 3  
as fitted Manchester Rpts. Nos. Position Starboard side, main engine room

Have the Auxiliary Engines been constructed under special survey 10, 101. Is a report sent herewith yes  
10, 108.



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**AIR RECEIVERS:** - Have they been made under survey

State No. of Report or Certificate

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*

*yes* Aux<sup>r</sup> receiver fitted with joint plug.  
 Is a drain fitted at the lowest part of each receiver *yes*

**Injection 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 \_\_\_\_\_  
 Actual \_\_\_\_\_

**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 \_\_\_\_\_  
 Actual \_\_\_\_\_

**IS A DONKEY BOILER FITTED?**

Is the donkey boiler intended to be used for domestic purposes only *no*

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

**PLANS.** Are approved plans forwarded herewith for Shafting \_\_\_\_\_ Receivers \_\_\_\_\_ Separate Fuel Tanks \_\_\_\_\_  
 (If not, state date of approval)

Donkey Boilers \_\_\_\_\_ General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *in London*  
 Oil Fuel Burning Arrangements *in London*

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied *yes (Complete)*

State the principal additional spare gear supplied

*1 C.C. Propeller; 1 screw shaft; 1 cylinder liner complete with jacket; 2 main pistons complete with skirts & rods; 8 spray plugs; 1 spherical bearing for main bearing, centre & side bottom ends; 2 R.R. starting valves; 2 cylinder relief valves; 4 Kawano pumps half dies; 1 fuel pump with body & 2 side duct & del<sup>r</sup> valves; 1 roller chain for cam drive*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	<i>40/Apr. 20. May. 3. 10. 17. 20. 21. 29. 30. June. 4. July. 9. 12. 21. Jan. 22. May. 15. 30. July.</i>
	During erection on board vessel - - -	<i>Aug. 1. 6. 8. 11. 14. 20. 27. 28. 30. Sep. 1. 12. 13. 16. 17. 18. 19. 22. 23.</i>
	Total No. of visits	<i>34.</i>

Dates of Examination of principal parts -	Cylinders	Covers	Pistons	Rods	Connecting rods
Crank shaft	Flywheel shaft	Thrust shaft	Intermediate shafts	Tube shaft	
Screw shaft	Propeller <i>4. 6. 40</i>	Stern tube <i>30. 5. 40</i>	Engine seatings <i>26. 4. 40</i>	Engines holding down bolts <i>28. 8. 41</i>	
Completion of fitting sea connections	<i>20. 5. 40</i>	Completion of pumping arrangements	<i>23. 9. 41</i>	Engines tried under working conditions	<i>23. 9. 41</i>
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	Identification Mark		

Identification Marks on Air Receivers

*Auxiliary: - 26825. Lloyd's 192947. Test 465 lbs. W.P. 275 lbs. 117.40. H. 14°C.*

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 *7, 2 gallon minimum portable extinguishers, steam & water connection as shown on approved plan*  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *no* 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 *not required*  
 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 of this vessel has been efficiently fitted on board in accordance with the approved plans, Secretary's letters & the requirements of the Rules. Materials & workmanship are good. The machinery has been tried, at the quay wall, under working conditions and found satisfactory and is eligible, in my opinion, for the*

*NOTATION of L.M.C. 9.41. OIL ENG., 1 D.B. 105 lbs., etc.*

*L.R. Home*

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee .. £	:	:	When applied for.
Special <i>1/3<sup>rd</sup></i> ... £	<i>36</i>	<i>9</i>	<i>6 SEP 1941</i>
Donkey Boiler Fee ... £	:	:	When received.
Travelling Expenses (if any) £	:	:	19.....

Committee's Minute

Assigned

*FRI. 17 OCT 1941*

*+ L.M.C. 9.41  
 D.B. - 105 lbs  
 oil del. Ch*



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