

# 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> ~~Twin~~ <sup>Triple</sup> ~~Quadruple~~ Screw vessel

ST. ESSYLT

Tons Gross 5634  
Net 3308

uilt at Sunderland

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

Engines made at Hawthorn

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

Monkey Boilers 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 Liverpool

Indicated 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

Oil ENGINES, &c. Type of Engines As H. 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 —

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge — 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 dia. of journals as fitted — Mid. length thickness — 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 — y

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 —

Is 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 —

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

Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia 16'-0" Pitch 12. 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

Insulating 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 —

Cooling 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"x12" Bullhead Pump, 1. 6"x6" Bilge pump, 1. 5" H.P. bilge pump.  
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

Bilge Pumps, No. and size 1, 12"x12", 3.5 H.P. Elec. 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. Room. 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 2 1/2" Tunnel Cofferdam. 2" portable, Tunnel

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 port, 1 Starboard at 3" dia. Emergency fuel oil 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 Has no action 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

compartment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from forward deck

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

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

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

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

Is any provision made for first Charging the Air Receivers

Recharging Air Pumps, No. — Diameter — Stroke — Driven by —

Auxiliary Engines crank shafts, diameter as per Rule As 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

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

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

**PLANS.** Are approved plans forwarded herewith for Shuffling

(If not, state date of approval)

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

1. C.I. 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 webs; 2 R.R. starting valves; 2 cylinder relief valves; 4 Kawano pumps half dies; 1 fuel pump with body & 2 side duct & 2 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 -- 40/Apr. 26. May 3. 10. 17. 20. 21. 29. 30. June 4. July 9. 12. 14. Jan. 22. May 15. 30. July 1.  
During erection on board vessel -- Aug. 1. 6. 8. 11. 14. 20. 27. 28. 30. Sep. 1. 12. 13. 16. 17. 18. 19. 22. 23.  
Total No. of visits 34.

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 4.6.40 Stern tube 30.5.40 Engine seatings 26.4.40 Engines holding down bolts 28.8.41  
Completion of fitting sea connections 20.5.40 Completion of pumping arrangements 23.9.41 Engines tried under working conditions 22.9.41  
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 179947. 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.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

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

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

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 # L.M.C 9.41. OIL ENG., 1 D.B. 105 lbs., etc.

The amount of Entry Fee .. £ : : When applied for.  
Special 1/3. 36 : 9 2 6 SEP 1941  
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 eng. etc

L.R. Home

Engineer Surveyor to Lloyd's Register of Shipping.



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