

REPORT ON OIL ENGINE MACHINERY

No. 86170

9 - SEP 1930

Received at London Office
NEWCASTLE-ON-TYNE

Date of writing Report

When handed in at Local Office

6.9.1930 Port of

Survey held at

Killisend-on-Tyne

Date, First Survey 3 - Jan 1930 Last Survey 3rd Sept. 1930

on the ~~Triple~~ ^{Single} Screw vessel "Athelfoam"

Tons { Gross
Net

built at Birkenhead
engines made at Killisend

By whom built Cammell Laird & Co. Ltd. Yard No. 978 When built 1930

By whom made North Eastern Marine & Cold Engine No. 2454 When made 1930

By whom made Boiler No. When made

Indicated Horse Power 2150

Owners United Molasses Coy. Ltd. Port belonging to

nom. Horse Power as per Rule 4 1/6

Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

MAIN ENGINES, &c. — Type of Engines

Keekspoor.

2 or 4 stroke cycle H Single or double acting S.A.

Maximum pressure in cylinders 500. Diameter of cylinders 28 3/4" Length of stroke 59" No. of cylinders 6 No. of cranks 6

Position of bearings, adjacent to the Crank, measured from inner edge to inner edge 980 mm Is there a bearing between each crank yes

Revolutions per minute 105 Flywheel dia. 2590 mm Weight 4.36 tons Means of ignition Compression Kind of fuel used F.P. above 150° F

Crank Shaft, dia. of journals as per Rule 458 mm as fitted 480 mm Crank pin dia. 180 mm Crank Webs Mid. length breadth 932 mm shrunk Thickness parallel to axis 290 mm Thickness around eye-hole 222 mm

Flywheel Shaft, diameter as per Rule 458 mm as fitted 480 mm Intermediate Shafts, diameter as per Rule 117 as fitted Thrust Shaft, diameter at collars as per Rule 12.285" as fitted 13 3/4"

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the tube shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the

propeller boss 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 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

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

Method of reversing Engines Compounded Air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners 70 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

non-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

Cooling Water Pumps, No. 1 @ 2 1/2 dia 350 stroke D.A. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 2 Diameter 140 mm Stroke 350 mm Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line No. and Size How driven

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size 1, D.A. 130 mm dia x 350 mm

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

In Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

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

ed from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers How are they protected

What 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

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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

If 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. one No. of stages 3 Diameters 140, 160, 200, 250, 300 Stroke 500 Driven by main engines

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

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

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

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

Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

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

High Pressure Air Receivers, No. Two Cubic capacity of each 18.15 c.ft. Internal diameter 15 3/4" thickness 5/8"

Seamless, lap welded or riveted longitudinal joint seamless Material Steel Range of tensile strength 28 to 32% Working pressure by Rules 109 lb lbs.

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness Working pressure by Rules

Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Lloyd's Register Foundation

W336-0055

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

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

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR *In accordance with & in excess of the Rules as per enclosed list.*

The foregoing is a *CERTIFICATE* of the *NEWCASTLE-ON-TYNE ENGINEERING CO., LTD.*

Stamphill Steam Manufacturer.
SECRETARY

Dates of Survey while building
 During progress of work in shops - *1930 Jan. 3. 27. Feb. 5. 19. 21. 24. 28. Apr. 9. May 5. 7. 16. 19. 21. 23. 27. June 4. 12. 17. July 3.*
 During erection on board vessel - *7. 8. 10. 11. 14. 15. 16. 18. 21. 22. 23. 24. 25. 28. 29. 31. Aug. 1. 5. 7. 18. 21. 22. 27. 28. 29. Sep. 3.*
 Total No. of visits *46.*

Dates of Examination of principal parts - Cylinders *21-5-30 to 18-4-30* Covers *21-5-30 to 10-4-30* Pistons *14-4-30* Rods *21-2-30* Connecting rods *6-3-30*
 Crank shaft *7-4-30* Flywheel shaft *4-4-30* Thrust shaft *4-4-30* Intermediate shafts _____ Tube shaft _____
 Screw shaft _____ Propeller _____ Stern tube _____ Engine seatings _____ Engines holding down bolts _____

Completion of fitting sea connections _____ Completion of pumping arrangements _____ Engines tried under working conditions _____
 Crank shaft, Material *0.4. Steel* Identification Mark *2454 W.B.* Flywheel shaft, Material *0.4. Steel* Identification Mark *3445 W.B.*
 Thrust shaft, Material *0.4. Steel* Identification Mark *3445 W.B.* Intermediate shafts, Material _____ Identification Marks _____
 Tube shaft, Material _____ Identification Mark _____ Screw shaft, Material _____ Identification Mark _____

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 _____
 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.)
This machinery has been built under Special Survey. Materials and workmanship good, hydraulic tests satisfactory. The machinery has been shipped to Birkenhead for installation in the vessel. The Liverpool surveyors have been notified.

Newcastle-on-Tyne

(The Surveyors are requested not to write on or behind the name for Committee's Minute.)

The amount of Entry Fee ... £ *5 : 0 : 0*
 Special *1/5 ths.* ... £ *44 : 2 : 4* When applied for *- 8 SEP 1930*
 Donkey Boiler Fee ... £ *✓* : When received *12. 9. 30 R.B.A.*
 Travelling Expenses (if any) £ *✓* :

William Butler
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned *See Liv. J.C. 98861*