

REPORT ON OIL ENGINE MACHINERY.

BOX CASE

No. 46562

Received at London Office 18 FEB 1936

Date of writing Report

10 When landed in at Local Office

17 FEB 1936

Port of

No. in Survey held at
Reg. Book.

Hull

Date, First Survey 30/12/35. Last Survey 13/2/1936.

Number of Visits 27

11196 on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel "Lizzie & Annie"Tons { Gross 117
Net 64

Built at North Shields

By whom built J. Softley & Sons

Yard No. - When built 1877-6 mo

Engines made at Lysekil.

By whom made Skandia-Verken A.B.

Engine No. - When made 1936

Donkey Boilers made at

By whom made

Boiler No. - When made -

Brake Horse Power 130

Owners B.W. Steamship, Tug & Lighter Co Ltd

Port belonging to Hull.

Nom. Horse Power as per Rule 46.56

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

Trade for which vessel is intended General Trading on Coast.

OIL ENGINES, &c. Type of Engines Heavy oil Direct Acting (Skandia) 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 20 Kg/cm² Diameter of cylinders 320 mm. Length of stroke 370 mm. No. of cylinders 2 No. of cranks 2.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 430 mm.

Is there a bearing between each crank Yes.

Revolutions per minute 325 Flywheel dia. 1050 mm Weight 1145 Kgs Means of ignition Compression Kind of fuel used Heavy oil.

Crank Shaft, dia. of journals as per Rule 140 mm as fitted Crank pin dia. 140 mm. Crank Webs Mid. length breadth 210 mm Mid. length thickness 83 mm Thickness parallel to axis shrunk Thickness around eye hole

Flywheel Shaft, diameter as per Rule 140 mm as fitted Intermediate Shafts, diameter as per Rule 110 mm as fitted Thrust Shaft, diameter at collars as per Rule 110 mm as fitted

Tube Shaft, diameter as per Rule 103 mm as fitted Is the shaft fitted with a continuous liner No 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 Yes If so, state type Cardervall. Length of Bearing in Stern Bush next to and supporting propeller 18"

Propeller, dia. 1270 mm Pitch No. of blades 3 Material C.I. whether Moveable No Total Developed Surface sq. feet

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

Measured Feed. Thickness of cylinder liners None fitted 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 - 3 1/2" dia x 2" stroke Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge Pumps worked from the Main Engines, No. 1 Diameter 3 1/2" Stroke 2" Can also be used as circ. pump Yes

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

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size None

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 Pump Room

In Holds, &c. As previously fitted.

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

led 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 of the plates Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible in 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 tank 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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. Air receiver charged from main engine cylinders. Driven by

Small Auxiliary Air Compressors, No. As previously fitted and operated. Driven by

Scavenging Air Pumps, No. Crankcase scavenging Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule None fitted. Position -

AIR RECEIVERS: - Is each receiver, which can be isolated, fitted with a safety valve as per Rule Safety valve fitted on charging line.

Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes.

High Pressure Air Receivers, No. None fitted Cubic capacity of each Internal diameter thickness

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

Starting Air Receivers, No. Receiver now fitted. Total cubic capacity 9 cu ft. Internal diameter 17 1/8" thickness 5/8"

Seamless, lap welded or riveted longitudinal joint Riveted Material M.S. Range of tensile strength 28/32 Ton Working pressure by Rules

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IS A DONKEY BOILER FITTED? **No**

If so, is a report now forwarded? ☒

Is the donkey boiler intended to be used for domestic purposes only ☒

PLANS. Are approved plans forwarded herewith for Shafting **Yes**

Receiver (New) **Yes**

Separate Tanks **As before**

Donkey Boilers ☒

General Pumping Arrangements **As before**

Oil Fuel Burning Arrangements ☒

SPARE GEAR.

Has the spare gear required by the Rules been supplied **See Sec. letters of 12/11/35 and 19/9/32 approving the**

State the principal additional spare gear supplied **following minimum spare gear which has now been placed**

on board:- 1 set of cylinder studs and nuts, 1 gudgeon pin, 2 conn rod bolts & nuts, 2 main bearing bolts & nuts, 1 set of bolts for crankshaft coupling, 1 set of bolts for thrust shaft, 1 fuel pump complete, 1 set of bilge & air pump valves & springs.

The following additional spare gear has also been provided:- 1 gudgeon pin bush, 1 set of main bearing bushes, 1 set of parts for ignition plugs and atomizers, 2 sets of piston rings, 1 set of air valve discs & springs, & 2 sets of fuel valves.

The foregoing is a correct description.

Manufacturer.

| Dates of Survey while building | During progress of work in shops-- | | During erection on board vessel-- | | Total No. of visits |
|--------------------------------|------------------------------------|--|-----------------------------------|---------------|---------------------|
| | 1935 | 1936 | 1935 | 1936 | |
| | Dec. 30. 31 | Jan 1. 2. 3. 6. 9. 10. 13. 14. 15. 18. 19. 16. 17. 18. 20. 21. 23. 24. 27. 30. | | Feb. 1. 3. 12 | 27 |

| Dates of Examination of principal parts-- | | Cylinders | Covers | Pistons | Rods | Connecting rods |
|---|----------|-----------|--------|---------|------|-----------------|
| Crank shaft | 6/1/36 | | | | | |
| Flywheel shaft | | | | | | |
| Thrust shaft | 6/1/36 | | | | | |
| Intermediate shafts | | | | | | |
| Tube shaft | | | | | | |
| Screw shaft | 31/12/35 | | | | | |
| Propeller | 31/12/35 | | | | | |
| Stern tube | 31/12/35 | | | | | |
| Engine seatings | 31/12/35 | | | | | |
| Engines holding down bolts | 16/1/36 | | | | | |
| Completion of fitting sea connections | | | | | | |
| Completion of pumping arrangements | | | | | | |
| Engines tried under working conditions | 1/2/36 | | | | | |
| Crank shaft, Material | Steel | | | | | |
| Identification Mark | | | | | | |
| Flywheel shaft, Material | | | | | | |
| Identification Mark | | | | | | |
| Thrust shaft, Material | Steel | | | | | |
| Identification Mark | | | | | | |
| Intermediate shafts, Material | | | | | | |
| Identification Marks | | | | | | |
| Tube shaft, Material | | | | | | |
| Identification Mark | | | | | | |
| Screw shaft, Material | Steel | | | | | |
| 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 fillings been complied with **As previously fitted.**

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 ☒

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 cylinders, pistons, valves and valve gears, conn. rods, top & bottom ends, framing, main bearings, crankshaft, clutch and maneuvering gear, main engine pumps, thrust and screw shafts, stern tube gland and propeller examined and found in good order. Seatings checked with approved plans. One additional starting air receiver has now been constructed and fitted in accordance with the Rules. Seating examined and adapted to suit new bedplate.**

This machinery has been satisfactorily fitted on board, tried under working conditions, and found in good order. It is eligible in my opinion to have record of L.M.C.-N.E.-2.36 T.S.(06)N.2.36

| The amount of Entry Fee | When applied for, |
|---------------------------------------|----------------------------|
| Special £ 10 : 0 | 19 1936 |
| Donkey Boiler Fee £ 29.4 | When received, 20/4 |
| Travelling Expenses (if any) £ | |

Committee's Minute

Assigned

H.W.B. Edwards.
Engineer Surveyor to Lloyd's Register of Shipping.



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