

REPORT ON OIL ENGINE MACHINERY.

No. 98396.

11 MAR 1931

Received at London Office.

Date of writing Report

19

When handed in at Local Office

-9 MAR. 1931

Port of

LIVERPOOL

No. in Survey held at
Reg. Book

Birkenhead

Date, First Survey

March 19th/30

Last Survey

March 3rd 1931.

Number of Visits

86

Single
Triple
Quadruple

Screw vessel

'Athel beach'

Tons

Gross

6450

Net

Built at

Birkenhead

By whom built

Cammell Laird & Co Ltd

Yard No. 973

When built

1930

Engines made at

Greenock

By whom made

John G Kennedy & Co Ltd

Engine No. 760

When made

1930

Donkey Boilers made at

Birkenhead

By whom made

Cammell Laird & Co Ltd

Boiler No. 973

When made

1930

Brake Horse Power

2300 @ 110 rpm

Owners

United Industralles Ltd

Port belonging to

Liverpool

Nom. Horse Power as per Rule

490 489

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended

L ENGINES, &c.

Type of Engines

Burmester Main

4 stroke cycle

4

Single or double acting

Single

Maximum pressure in cylinders

500 lb

Diameter of cylinders

740 mm

Length of stroke

1500 mm

No. of cylinders

6

No. of cranks

6

Number of bearings, adjacent to the Crank, measured from inner edge to inner edge

1004 mm

Is there a bearing between each crank

Yes

Revolutions per minute

110

Flywheel dia.

2489 mm

Weight

2.5 tons

Means of ignition

Compression

Kind of fuel used

Diesel

Crank Shaft, dia. of journals

as per Rule

485 mm

Crank pin dia.

485 mm

Crank Webs

Mid. length breadth

shrunk

Thickness parallel to axis

310 mm

Flywheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

15"

Crank Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the shaft fitted with a continuous liner

Yes

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

Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

No length

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

light fit

If two liners are fitted, is the shaft lapped or protected between the liners

Yes

Is an approved Oil Gland or other appliance fitted at the after

End of the tube shaft

No

Length of Bearing in Stern Bush next to and supporting propeller

5-7"

Propeller, dia.

16'-0"

Pitch

11'-0"

No. of blades

4

Material

Brass

whether Moveable

No

Total Developed Surface

80

sq. feet

Method of reversing Engines

Compressed Air

Is a governor or other arrangement fitted to prevent racing of the engine when disengaged

Yes

Means of lubrication

Lubrication

Thickness of cylinder liners

53/32 mm

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

Led up funnel

Cooling Water Pumps, No.

one in Main Engine

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.

No. and Size

1-8'x9'x8" ; 1-7'x7'x8"

Pumps connected to the Main Bilge Line

How driven

Steam

Ballast Pumps, No. and size

1-8'x9'x8"

Lubricating Oil Pumps, including Spare Pump, No. and size

one 10'x10"

Two 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

3 @ 3 1/2" ; 1 @ 2 1/2" - 2 @ 2"

Holds, &c.

2 @ 3' in Cargo pump room ; 2 @ 2 1/2' in for pump room ; 2 @ 2 1/2' in for pump room

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

2 @ 5"

All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Mud boxes fitted

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

All Sea Connections fitted direct on the skin of the ship

Yes

Are they fitted with Valves or Cocks

Both

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

Do pipes pass through the bunkers

None

How are they protected

Yes

Do pipes pass through the deep tanks

None

Have they been tested as per Rule

Yes

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

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

Department to another

Yes

Is the Shaft Tunnel watertight

No tunnel

Is it fitted with a watertight door

Yes

worked from

Yes

In 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

150-675-750 mm

Stroke

460 mm

Driven by

Main Engine

Auxiliary Air Compressors, No.

one

No. of stages

3

Diameters

4", 8 1/4", 14 1/4"

Stroke

9"

Driven by

Steam Engine

All Auxiliary Air Compressors, No.

Yes

No. of stages

Yes

Diameters

Yes

Stroke

Yes

Driven by

Yes

Ventilating Air Pumps, No.

Yes

Diameter

Yes

Stroke

Yes

Driven by

Yes

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

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

Yes

What means are provided for cleaning their inner surfaces

Mankole down provided

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

Yes

Pressure Air Receivers, No.

2

Cubic capacity of each

150 litres

Internal diameter

12"

thickness

1/2"

Seamless, lap welded or riveted longitudinal joint

Seamless

Material

Steel

Range of tensile strength

29-33 tons

Working pressure by Rules

1000 lb/sq. in.

Lifting Air Receivers, No.

2

Total cubic capacity

1100 cu ft

Internal diameter

6'3"

thickness

1 1/16"

Seamless, lap welded or riveted longitudinal joint

Riveted

Material

Steel

Range of tensile strength

28-32 tons

Working pressure by Rules

367 lb/sq. in.

IS A DONKEY BOILER FITTED? *Yes - two.* If so, is a report now forwarded? *Yes*
PLANS *(7)* Are approved plans forwarded herewith for Shifting *Yes (1).* Receivers *Yes (1)* Separate Tanks *-*
(If not, state date of approval) Donkey Boilers *Yes (1)* General Pumping Arrangements *Yes (1).* Oil Fuel Burning Arrangements *Yes (3)*
SPARE GEAR *as per requirements of Rules and attached list.*

The foregoing is a correct description,
J. H. LAIRD AND COMPANY LIMITED.

Manufacturer.

SECRETARY

Dates of Survey while building
During progress of work in shops - *Mar 19. 21. 25. 28. 31. Apr 3. 7. 10. 22. 25. May 6. 13. 22. 23. June 3. 10. 11. 12. 14. 15. 19. 25. 27. July 1. 4. 7. 8. 9. 10. 11. 14. 16. 17. 21. 23.*
During erection on board vessel - *Aug 1. 12. 15. 18. 20. 22. 25. 27. 30. Sept 1. 3. 8. 10. 12. 14. 20. 23. 24. 30. Oct 1. 8. 9. 10. 13. 16. 20. 21. 22. 30. Nov 3. 4. 7. 9. 10. 12. 13. 14. 17. 19.*
Total No. of visits *86.*

Dates of Examination of principal parts - Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *7/12/20 3/9/21* Tube shaft *✓*
Screw shaft *4/12/20 7/7/21* Propeller *3/4/21 23/9/21* Stern tube *3/9/20 27/9/20* Engine seatings *23/9/20* Engines holding down bolts *4/11/21*
Completion of fitting sea connections *27/9/20* Completion of pumping arrangements *27/9/20* Engines tried under working conditions *5/12/20*
Crank shaft, Material *Steel* Identification Mark *R 660 WSM* Flywheel shaft, Material *✓* Identification Mark *2866 R*
Thrust shaft, Material *Steel* Identification Mark *LA. 1905 WSM* Intermediate shafts, Material *Steel* Identification Marks *3889 R*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *3906 R*

Is the flash point of the oil to be used over 150° F. *Yes.*

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 (Sik Rpt 19235) has been satisf
fitted on board, in accordance with the Rules and the approved
Schem been examined during sea trials under full working
Conditions and found satisfactory, and is eligible in my opinion
for record of LMC 3.31 in Register book.

The amount of Entry Fee ... £
Special ... £
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for,

GNK OFFICE

When received,

13-9-30-9

18-9-30-9

10 MAR. 1931

Committee's Minute

Assigned

+ LMC 3.31

Oil Engine C.
Eleo. Light.

J. H. LAIRD
Engineer Surveyor to Lloyd's Register of Shipping



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Lloyd's Register
Foundation