

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 106781

26 FEB 1936

Received at London Office

Date of writing Report

19

When handed in at Local Office

22/2/36

Port of

LIVERPOOL

No. in Survey held at
Reg. Book.

Birkenhead

Date, First Survey

4/7/35

Last Survey

6/2/36

Number of Visits

Single
on the Twin
Triple
Quadruple

Screw vessel

'Dunedin Star'

Tons

Gross

11168

Net

6855

Built at

Birkenhead

By whom built

Cammell Laird & Co Ltd

Yard No.

1009 When built

1936

Engines made at

Winterthur, Switzerland

By whom made

Salzer Bros Ltd

Engine No.

1009 When made

1936

Donkey Boilers made at

Renfrew

By whom made

Babcock & Wilcox Ltd

Boiler No.

1009 When made

36

Brake Horse Power

12000 (total)

Owners

Blue Star Line Ltd

Port belonging to

London

Nom. Horse Power as per Rule

2516

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which vessel is intended Refrigerated & general cargo

OIL ENGINES, &c.—Type of Engines Salzer, solid injection 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders

850 lb sq in

Diameter of cylinders

720 mm

Length of stroke

250 mm

No. of cylinders

18 (2 Engines)

No. of cranks

18 total

Mean Indicated Pressure

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

Is there a bearing between each crank

Revolutions per minute

Flywheel dia.

Report 132

Means of ignition

Kind of fuel used

Crank Shaft, dia. of journals

as per Rule

See Winterthur Rpt 132

Crank pin dia.

Crank Webs

Mid. length breadth

Thickens parallel to axis

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

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the

tube screw 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 one 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 tight

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

If so, state type

Yes

Length of Bearing in Stern Bush next to and supporting propeller

6'6"

Propeller, dia.

17'0"

Pitch

17'9"

No. of blades

3

Material

Hard Bronze

Whether Moveable

No

Total Developed Surface

84.3 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

Forced

Yes

Thickness of cylinder liners

45 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

Led up funnel

Cooling Water Pumps, No.

See Winterthur Rpt 132

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.

Yes

Diameter

Yes

Stroke

Yes

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size

one bilge pump 40 tons/hr, one ballast pump 200 tons/hr, one general service 80 tons/hr

How driven

all electric motors

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

Ballast Pumps, No. and size

one 200 tons/hr

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

3-48 cu ft/hr

Are 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

4-3 1/2" dia

In Pump Room

In Holds, &c. 4-2 1/2" x 1-3" dia in tunnel; 2-3 1/2" in 4 hold; 2-3 1/2" in 2 hold; 2-3 1/2" in 3 hold

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

2-5" x 1-6"

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

Yes

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

Yes

Are 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

What pipes pass through the bunkers

None

How are they protected

Yes

What pipes pass through the deep tanks

Cofferdam suction, bilge duct & scupper

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

Yes

compartment to another

Yes

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

Yes

Main Air Compressors, No.

2

No. of stages

two

Diameters

2 1/2" & 5 1/4"

Stroke

7 1/2"

Driven by

electric motors

Auxiliary Air Compressors, No.

1

No. of stages

two

Diameters

7" & 2 1/2"

Stroke

4 3/4"

Driven by

steam

Small Auxiliary Air Compressors, No.

Yes

No. of stages

Yes

Diameters

Yes

Stroke

Yes

Driven by

2020

Scavenging Air Pumps, No.

2

Diameter

1750 mm

Stroke

750 mm

Driven by

Main Engines

Auxiliary Engines crank shafts, diameter

as per Rule

See Winterthur Rpt 133

as fitted

11164-0157

Lloyd's Register
Foundation

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

Main Starting

On 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. *2* ✓

Cubic capacity of each *16 cu metres*

Internal diameter *1532 mm*

thickness *34 mm*

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

Starting Air Receivers, No.

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

IS A DONKEY BOILER FITTED? *Yes - two* ✓

If so, is a report now forwarded? *Yes* ✓

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

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval) *Yes - 4.3.35*

Receivers *19.8.35*

Separate Tanks *Yes*

Donkey Boilers *Yes* ✓

General Pumping Arrangements *Yes* ✓

Oil Fuel Burning Arrangements *Yes* ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes* ✓

State the principal additional spare gear supplied

See Winterkous Report 132

The foregoing is a correct description,

CAMMELL LAIRD & CO. LIMITED

Manufacturer.

Dates of Survey while building
During progress of work in shops - *July 4, 8, 11, 12, 15, 17, 18, 22, 24, Aug 5, 12, 13, 14, 16, 19, 21, 23, Sept 9, 12, 13, 16, 24, 25, 26, 27, 30, Oct 2, 3, 7, 8, 15, 17, 18, 21, 23, 25, 28, 29, 31.*
During erection on board vessel - *Nov 4, 5, 7, 9, 11, 12, 14, 15, 18, 21, 26, 27, 28, 29, Dec 2, 3, 4, 6, 9, 12, 13, 16, 17, 19, 23, 31, Jan 2, 6, 7, 8, 13, 14, 15, 17, 22, 23, 24, 25, 28, 30, Feb 3, 4, 5, 6.*
Total No. of visits *83.*

Dates of Examination of principal parts—Cylinders

Crank shaft

Flywheel shaft

Thrust shaft

Pistons

Rods

Connecting rods

Screw shaft

Propeller

Stern tube

Intermediate shafts

Tube shaft

Completion of fitting sea connections

Completion of pumping arrangements

Engines holding down bolts

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Mark

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 *Yes* ✓

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 *Yes* ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *Yes* ✓

Is this machinery duplicate of a previous case *No* ✓

If so, state name of vessel *Yes* ✓

General Remarks

(State quality of workmanship, opinions as to class, &c.)

This Machinery has been satisfactory fitted on board, in accordance with the Rules and the approved plans. It has been examined under full working conditions during sea trials and found satisfactory & is eligible in our opinion for classification in Register book with record of + LMC 2.36

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

When applied for,

When received,

Committee's Minute

Assigned

+ LMC 2.36.

C.L. Elec. Light

J. S. Milton.

P. Leonard.

Engineer Surveyor to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation