

REPORT ON OIL ENGINE MACHINERY.

No 112620

Received at London Office

JUN 1 1939

Date of writing Report 14/16/39 When handed in at Local Office

30 MAY 1939

Port of

LIVERPOOL

No. in Survey held at

Birkenhead

Date, First Survey

29/6/38

Last Survey

12/5/39

Reg. Book.

Number of Visits

92

87788 on the

Single
Twin
Triple
Quadruple

Screw vessel

'Diloma'

Tons { Gross 8146
Net 4767.

Built at Birkenhead

By whom built Cammell Laird & Co Ltd

Yard No. 1037

When built 1939

Engines made at Newcastle on Tyne

By whom made Hawthorn Leslie & Co Ltd

Engine No. 3955

When made 1939

Donkey Boilers made at Birkenhead

By whom made Cammell Laird & Co Ltd

Boiler No. 1037

When made 1939

Brake Horse Power 3500

Owners Anglo Saxon Petroleum Co

Port belonging to London

Nom. Horse Power as per Rule 502

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Walsworth Supercharged 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders

700 lb/sq in

Diameter of cylinders

650 mm

Length of stroke

1400 mm

No. of cylinders

8

No. of cranks

8

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.

Weight

Means of ignition

Kind of fuel used

Crank Shaft, { Solid forged
Semi built
All builtdia. of journals
as per Rule
as fittedCrank webs
as per Rule
as fittedMid. length breadth
as per Rule
as fittedMid. length thickness
as per Rule
as fittedThrust Shaft, diameter at collars
as per Rule
as fittedThrust Shaft, diameter at collars
as per Rule
as fittedThrust Shaft, diameter at collars
as per Rule
as fittedThrust Shaft, diameter at collars
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as per Rule
as fittedThrust Shaft, diameter at collars
as per Rule
as fittedThrust Shaft, diameter at collars
as per Rule
as fitted

Flywheel Shaft, diameter

as per Rule
as fitted

Intermediate Shafts, diameter

as per Rule
as fitted

Screw Shaft, diameter

as per Rule
as fittedIs the { tube
screw } shaft fitted with a continuous lineras per Rule
as fittedas per Rule
as fittedas per Rule
as fittedas per Rule
as fitted

Tube Shaft, diameter

as per Rule
as fitted

Screw Shaft, diameter

as per Rule
as fittedas per Rule
as fittedas per Rule
as fittedas per Rule
as fittedas per Rule
as fittedas per Rule
as fittedas per Rule
as fittedas per Rule
as fittedas per Rule
as fitted

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

Yes

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

Yes

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

5'2 3/8"

Propeller, dia.

15'0"

Pitch

12'0"

No. of blades

4

Material

Bronze

whether Moveable

Solid

Total Developed Surface

72 sq. feet

Method of reversing Engines

See Newcastle Rpt 97225

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

Yes

Means of lubrication

See Newcastle Rpt 97225

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

If the exhaust is taken overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No.

See Newcastle Rpt 97225

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.

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size

How driven

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

See Newcastle Rpt 97225

Ballast Pumps, No. and size

1-Gen Service 8'x8'x10'

2-Main Engine Rotary

35 tons/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

3-3 1/2"

In Pump Room

2-4"

Holds, &c.

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

1-5' direct

1-7' Imaginary

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

Yes

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 the Overboard Discharges above or below the deep water line

above

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

How are they protected

Yes

at pipes pass through the bunkers

Cofferdam suction & transfer lines

at 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

partment to another

Yes

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

Yes

In Air Compressors, No.

None

No. of stages

Diameters

Stroke

Driven by

1 by Diesel Engine

Auxiliary Air Compressors, No.

2

No. of stages

2

all Auxiliary Air Compressors, No.

None

No. of stages

Diameters

Stroke

Driven by

1 by Diesel Engine

Is provision made for first Charging the Air Receivers

1 Steam driven Air Compressor

Refrigerating Air Pumps, No.

Yes

Auxiliary Engines crank shafts, diameter

as per Rule
as fitted

No.

Position

Is the Auxiliary Engines been constructed under special survey

Yes

Is a report sent herewith

Yes

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AIR RECEIVERS:—Have they been made under survey *yes*
Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*
Can the internal surfaces of the receivers be examined and cleaned *yes*
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 *✓*
Starting Air Receivers, No. *2* Total cubic capacity *800 cu ft* Internal diameter *4' 10"* thickness *27/32"*
Seamless, lap welded or riveted longitudinal joint *Welded* Material *Steel* Range of tensile strength *28-32 tons* Working pressure *371 lb*
IS A DONKEY BOILER FITTED? *yes* 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 *✓* Receivers *yes* Separate Fuel Tanks *✓*
Donkey Boilers *yes* General Pumping Arrangements *with duplex pumps* Pumping Arrangements in Machinery Space *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 *as per attached lists*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops-- *June 29, July 5, 7, 15, 21, Aug 8, 10, 16, 18, 26, 31, Sept 2, 13, 14, 19, 23, 26, 30, Oct 4, 7, 12, 13, 24, 27, 28, Nov 1, 2, 10, 15, 16, 17, 21, 23, Dec 5, 8*
During erection on board vessel-- *Jan 9, 12, 18, 23, 24, 25, 27, 31, Feb 6, 11, 7, 8, 9, 10, 13, 14, 17, 20, 21, 23, 24, 28, Mar 2, 7, 9, 10, 14, 15, 17, 20, 22, 23, 24, 29, 30, Apr 3, 6, 11, 12, 13, 18, 20, 17, 19*
Total No. of visits *92*
Dates of Examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *6.1.39* Tube shaft *✓*
Screw shaft *6.1.39* Propeller *9.2.39* Stern tube *24.1.39* Engine seatings *31.1.39* Engines holding down bolts *28.2.39*
Completion of fitting sea connections *9.2.39* Completion of pumping arrangements *25.4.39* Engines tried under working conditions *30.3.39*
Crank shaft, Material *See how* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *3493 SRS*
Thrust shaft, Material *See how* Identification Mark *✓* Intermediate shafts, Material *Steel* Identification Marks *3497 SRS*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *3496 SRS*
Identification Marks on Air Receivers *101-2 Lloyd's 550th 10 JEM*

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 *✓* 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.) *This machinery has been satisfactory installed on board, in accordance with the Rules and the approved plans. It has been examined during sea trials under full working conditions & found satisfactory and is eligible in my opinion for classification in Register Book with notation of 4 LMC 5.39 & DB 180th 10.*

The amount of Entry Fee *£ 33 : 8 : 0* When applied for, *31 MAY 1939*
Special *1/3 F.E.FEE*
Donkey Boiler Fee *£ 16 : 14 : 0* When received, *39 7/16*
AIR RECEIVERS
Travelling Expenses (if any) *£ 4 : 4 : 0*
LIVERPOOL 31 MAY 1939

Committee's Minute

Assigned

+ LMC 5.39 C.L.
DB 180th. F.D. Oil engines.

J. D. Milton
Engineer Surveyor to Lloyd's Register of Shipping.



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