

REPORT ON OIL ENGINE MACHINERY.

No 100.147

Date of writing Report

19

When handed in at Local Office

30/11/42 Port of

Received at London Office

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Newcastle

Date, First Survey

7/1/41

Last Survey

26/1/1942

Number of Visits

84

Single
on the
Triple
Quadruple

Screw vessel

SAN VENANCIO

Tons

Gross 8152

Net 4801

Built at Newcastle (Hebburn)

By whom built R.W. Hawthorn, Leslie & Co.

Yard No. 636

When built 1942-

Engines made at " (St. Peter's)

By whom made

ditto

Engine No. 3974

When made 1942-

Donkey Boilers made at ditto.

By whom made

ditto

Boiler No. 3974

When made 1942.

Brake Horse Power 3500.

Owners

Eagle Oil Coy

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 Ocean going, Carrying Petroleum in bulk.

OIL ENGINES, &c. Type of Engines Hawthorn-Workshop 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.

Mean Indicated Pressure

135 lb/sq. in.

No. of cylinders

8

No. of cranks

8.

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

844 mm.

Is there a bearing between each crank

Yes.

Revolutions per minute

120

Flywheel dia.

2260 mm.

Weight

6000 kg.

Means of ignition

Heat of Compression

Kind of fuel used

Heavy oil

Crank Shaft,

Solid forged

Semi built

All built

dia. of journals

as per Rule 448 mm.

as fitted 460.

Crank pin dia.

460 mm.

Crank Webs

Mid. length breadth

870 mm.

Thickness parallel to axis

267 & 290 mm.

Mid. length thickness

267 "

Thickness around eyehole

204 mm.

Flywheel Shaft, diameter

as per Rule 448 mm.

as fitted 460

Intermediate Shafts, diameter

as per Rule 325 mm.

as fitted 470 mm.

Thrust Shaft, diameter at collars

as per Rule 341 mm.

as fitted 460.

Tube Shaft, diameter

as per Rule none

as fitted

Screw Shaft, diameter

as per Rule 358 mm.

as fitted 400

Is the tube screw

shaft fitted with a continuous liner

Yes.

Bronze Liners, thickness in way of bushes

as per Rule 18.55 mm.

as fitted 20 mm.

Thickness between bushes

as per Rule 13.9 mm.

as fitted 15 mm.

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

In 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

a tight 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

If so, state type

Yes

Length of Bearing in Stern Bush next to and supporting propeller

1585 mm.

Propeller, dia. 15'-0"

Pitch 12'-0"

No. of blades

4

Material

Mang.

whether Moveable

No

Total Developed Surface

72 sq. feet

Method of reversing Engines

Air Servo Motor

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

Yes

Means of lubrication

Forced

Thickness of cylinder liners

55 mm.

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting 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 to top of funnel.

Cooling Water Pumps, No. 2

1 Rotary on main eng.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Yes

Can one be overhauled while the other is at work

Yes

Bilge Pumps worked from the Main Engines, No. 2

Diameter Rotary

Stroke

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size Three in all - viz. two Rotary each

35 tons/hr. & one G.S.P. 12 x 8 x 12 duplex

How driven

by main engine

Indep. Steam Eng.

120 tons/hr.

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 12 x 8 x 12 duplex G.S.P.

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

1 Rotary 40 tons/hr. on M. Eng.

1 Standby 8 x 8 x 10 duplex Steam

50 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 g 3 1/2" (aft. P.S.); 2 g 2 1/2" to Cofferdam.

In Holds, &c.

In 7 Hold 2 g 2"; In 7 Hold 2 g 2"; In 7 Hold Pump Room 10 1/2"; In 7 & A Cofferdams one 4" in each

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

one 5" to G.S.P. on P. side; one 7" Emerg. to Cooling water Pump on S. side

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

Yes

Are the Bilge Suctions in the Machinery Spaces

Yes

Are they fitted with Valves or Cocks

with 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

4" bore Suction from aft Cofferdam.

How are they protected

None necessary.

What pipes pass through the deep tanks

None

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 compartment to another

Yes

Is the Shaft Tunnel watertight

None

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. None

No. of stages

Diameters

Stroke

Driven by

one by Oil Eng. on S. side

Auxiliary Air Compressors, No. Two

No. of stages

Diameters

Stroke

Driven by one by Steam Eng. on P. side

Small Auxiliary Air Compressors, No. None

No. of stages

Diameters

Stroke

Driven by

one by Oil Eng. on S. side

What provision is made for first Charging the Air Receivers

by Steam driven air compressor.

Scavenging Air Pumps, No. None

Diameter

Stroke

Driven by

one - driving a 25 Kw Dyno & a Compressor

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No. One - driving a 25 Kw Dyno & a Compressor

Position on S. side

Thru Clutch

Have the Auxiliary Engines been constructed under special survey

Yes

Ruston Hornsby oil engine

Is a report sent herewith

Copy of Cert. To G.S.P. Nottingham

N. 204200.

AIR RECEIVERS:—Have they been made under survey *Yes*

State No. of Report or Certificate

Two Receivers

*Lloyd's Test 550 lb
WP 350 lb
3-10-41 W.N.*

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*

Is a drain fitted at the lowest part of each receiver *Yes*

Injection Air Receivers, No. *None*

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Actual

Starting Air Receivers, No. *Two*

Total cubic capacity *1800 cub. ft.*

Internal diameter

thickness

by Rules

371 lb

Seamless, lap welded or riveted longitudinal joint

*DButt Straps
Treb. riveted*

Material

5

Range of tensile strength

28-32 tons

Working pressure

Actual

350 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 - also for Steam Auxiliaries*

PLANS. Are approved plans forwarded herewith for Shafting *21/6/40*

(If not, state date of approval)

Receivers *21/6/40*

Separate Fuel Tanks

22/12/39

Donkey Boilers *21/6/40*

General Pumping Arrangements

14/1/41

Pumping Arrangements in Machinery Space

24/6/40

Oil Fuel Burning Arrangements

SPARE GEAR.

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

State the principal additional spare gear supplied *As per list attached*

The foregoing is a correct description,

R. & W. HAWTHORN, LESTER & CO., LIMITED

Manufacturer.

1941
Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits *84*
Dates of Examination of principal parts—Cylinders *27/6/41 to 27/7/41* Covers *27/7/41* Pistons *1/7/41 to 28/7/41* Rods *15/8/41 to 25/8/41* Connecting rods *1/8-8-41*
Crank shaft *25/7/40* Flywheel shaft *29/8/41* Thrust shaft *17/7/41* Intermediate shafts *24/9/41* Tube shaft *none*
Screw shaft *17/9/41* Propeller *17/9/41* Stern tube *25/9/41* Engine seatings *25/9/41* Engines holding down bolts *24/11/41*
Completion of fitting sea connections *25/9/41* Completion of pumping arrangements *19/1/42* Engines tried under working conditions *19/1/42*
Crank shaft, Material *F.S.* Identification Mark *10362 HAI.* Flywheel shaft, Material *10362 HAI.* Identification Mark *8797.*
Thrust shaft, Material *F.S.* Identification Mark *10362 HAI.* Identification Mark *8798.* Intermediate shafts, Material *F.S.* Identification Marks *10362 HAI 10157.*
Tube shaft, Material *none* Identification Mark *✓* Screw shaft, Material *F.S.* Identification Mark *10362 HAI 10150.*

Identification Marks on Air Receivers

on both Receivers

*LLOYD'S TEST 550 LBS
WP 350 LBS W.N.*

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 *Not required*

Is this machinery duplicate of a previous case *Yes*

If so, state name of vessel *DIPLODON. Regt 99860.*

Ship 632. Reg 3969.

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

The Machinery of this Vessel has been constructed under special survey in accordance with the approved plans and the Society's Rules, and the materials and workmanship are good.

The Machinery has been efficiently installed on board, tested under working conditions with satisfactory results, and is eligible, in my opinion, for record + LMC 1.42, and notations DB WP 180 lb.

CL. Oil Eng. Machy aft.

The amount of Entry Fee .. £ 6 :

Special £ 100 : 2 :

Donkey Boiler Fee £ 23 : 6 :

2 Starting Air Receivers £ 8 : 8 :

Travelling Expenses (if any) £ :

When applied for,

14 FEB 1942

When received,

19

Committee's Minute

Assigned

FRI. 13 FEB 1942

*+ LMC 1.42 Oil Eng
DB - 180 lb*

A Watt

Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation