

REPORT ON OIL ENGINE MACHINERY.

No 67930

Received at London Office

13 JAN 1944

Date of writing Report

When handed in at Local Office

10.1.

1944 Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 24th Sep 1942 Last Survey 30 Dec 1943

Number of Visits 63

Single
on the Twin Screw vessel
Triple
Quadruple

"SAN VITO"

Tons Gross 8163.07
Net 4824.98

Built at Glasgow

By whom built

Harland + Wolff. Ltd.

Yard No. 1183.6 When built 1943-12

Engines made at Glasgow

By whom made

Harland + Wolff. Ltd.

Engine No. 1183 When made 1943

Donkey Boilers made at Belfast

By whom made

Harland + Wolff. Ltd.

Boiler No. 1183 When made 1943

Brake Horse Power 3500

Owners

Eagle Oil + Shipping Co. Ltd.

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

Tanker

OIL ENGINES, &c.—Type of Engines Heavy oil. Airless injection 2 or 4 stroke cycle 4 Single or double acting SA

Maximum pressure in cylinders 700 lb.

Diameter of cylinders

650 mm

Length of stroke 1400 mm

No. of cylinders 8

No. of cranks 8

Mean Indicated Pressure 128 lb

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. 2218.5 mm

Weight 2150 Kgs.

Means of ignition Compression

Kind of fuel used Diesel oil

Crank
Shaft,Solid forged
Semi built
All builtdia. of journals
as per Rule
as fittedCrank pin dia. 465 mm
as fitted 465 mm
BORED 134

Crank Webs

Mid. length breadth 800 mm
Mid. length thickness 267 mmThickness parallel to axis 267 mm at pin
Thickness around eye hole 232.5 mmFlywheel Shaft, diameter
as per Rule
as fittedIntermediate Shafts, diameter
as per Rule
as fitted

App. 19"

Thrust Shaft, diameter at collars
as per Rule
as fitted

App. 18"

Tube Shaft, diameter
as per Rule
as fittedScrew Shaft, diameter
as per Rule
as fitted

App. 18"

Is the shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes
as per Rule
as fitted

App. 7/8

Thickness between bushes
as per Rule
as fitted

App. 11/16

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

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

no

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia. 15'-9"

Pitch 11'-3"

No. of blades 4

Material Bronze

whether Moveable

no

Total Developed Surface 83.77 sq. feet

Method of reversing Engines Direct

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

yes

Means of lubrication

forced

Thickness of cylinder liners

48 lb

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

Cooling Water Pumps, No. 6

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. one

Diameter 32 ton per hour

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

Bilge pump 32 ton per hour

Sanitary pump 32 ton per hour

General Service pump 100 ton per hour

How driven

Main engine

Main engine

Steam engine

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

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one 100 ton per hour, Engine driven

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

Stern 3 1/2"

Port 3 1/2"

aft. Well 3 1/2"

2 Cofferdams at 2 1/2" each

In Pump Room

In Holds, &c.

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

2 at 6"

O.F. transfer pump suction from gutterways, 2 @ 2"

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

Steel stools

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

below

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

How are they protected

What pipes pass through the deep tanks

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

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

yes

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. 2

No. of stages

2

Diameters 280 + 245

Stroke 130 mm

Driven by Steam engine

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Steam driven compressor.

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

As approved

Pin 3 1/4"

Journals 4 1/16"

No.

Position

Engine Room. Stern Forward.

Have the Auxiliary Engines been constructed under special survey

yes.

Is a report sent herewith Nottingham Cert. C. 2058.

AIR RECEIVERS: — Have they been made under survey? *yes* State No. of Report or Certificate *Belfast Report*

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. *✓* 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 cuft.* Internal diameter *5'-1 23/32"* thickness *shell 55" ends 2 1/2"*

Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *ends 26/30* Working pressure *by Rules 356 lb Actual 356*

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes, Belfast Rpt No. 13597*

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

PLANS. Are approved plans forwarded herewith for Shafting *yes* Receivers *yes* Separate Fuel Tanks *yes*

Donkey Boilers *yes* General Pumping Arrangements *yes* 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 enclosed list.*

The foregoing is a correct description.

Wm. J. Wright

Manufacturer.

Dates of Survey while building

During progress of work in shops--	1942 Sep 24 Oct 28 Nov 24 Dec 22	1943 Feb 16.22 Mar 5.9 Apr 13 May 10 Jun 10.15 July 19.23.26.29
During erection on board vessel--	Aug 13.17.31 Sep 1.2.15.24.29 Oct 1.5.6 7.8.13.14.21.26.28 Nov 1.2.3.4.5.8.9.10.11.16.17.19.24.26.29.30 Dec 2.3.8.9.10.14	
Total No. of visits	63	

Dates of Examination of principal parts—Cylinders 7-10-43 Covers 7-10-43 Pistons 8-10-43 Rods 8-10-43 Connecting rods 13-10-43

Crank shaft 15-6-43 Flywheel shaft *✓* Thrust shaft 15-6-43 Intermediate shafts 2-9-43 Tube shaft *✓*

Screw shaft 14-10-43 Propeller 14-10-43 Stern tube 14-10-43 Engine seatings 21-10-43 Engines holding down bolts 8-12-43

Completion of fitting sea connections 21-10-43 Completion of pumping arrangements 27-12-43 Engines tried under working conditions 30-12-43

Crank shaft, Material *Steel* Identification Mark *Lloyd's 1183 P9* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *Steel* Identification Mark *Lloyd's S.6060 P9* Intermediate shafts, Material *Steel* Identification Marks *Lloyd's S.6321 P9*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *Lloyd's S.5723*

Identification Marks on Air Receivers *Lloyd's test, 259 G.T.T. 6-8-43 + 260 G.T.T. 30-8-43.*

Steam pipes *S.D. Bessemer steel tubes taken from H.W. stock. Flanges marked accordingly.*

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*

Description of fire extinguishing apparatus fitted *Perforated steam pipes under boilers. Portable extinguishers as per B.O.T. & Merchant Shipping Regulations.*

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 *yes* If so, state name of vessel *SAN VULFRANO. Glasgow Rpt No. 66526*

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

The machinery of this vessel has been constructed under Special Survey and in accordance with the approved plans and the Rules of this Society.

The materials and workmanship are good.

The machinery has been efficiently secured in position on board the vessel, and afterwards tried under full working conditions with satisfactory results.

The machinery is eligible in my opinion to be classed in the Register Book with notation of *+ LMC 12.43. C.L. 2 DB. WP 180 lb.*

The amount of Entry Fee .. £ 6 : - : When applied for, *11 JAN 1944*

Special £ 100 : 2 : When received, *11 JAN 1944*

Donkey Boiler Fee £ : : : 19

Travelling Expenses (if any) £ : : : 19

Committee's Minute

Assigned *-/- Recd 12.43* *acc Eng.*

L 180 lb.

P. Fitzgerald & G. E. Murdoch.
Engineer Surveyor to Lloyd's Register of Shipping.



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