

RECEIVED
Rpt. 4b.
30 DEC 1943

REPORT ON OIL ENGINE MACHINERY.

No. 67848.

Received at London Office

Date of writing Report

19

When handed in at Local Office

13. 12. 43 Port of

Glasgow

Date, First Survey

8. 9. 42

Last Survey

3- 12 -

1943

Number of Visits

81

No. in Survey held at
Reg. Book.

Single
on the Twin
Triple
Quadruple
Screw vessel

"NERITINA"

Tons: Gross 8227.82
Net 4783.63

Built at

Glasgow

By whom built

Harland & Wolff. Ltd.

Yard No. 1174 G. When built 1943-12

Engines made at

Glasgow

By whom made

Harland & Wolff. Ltd.

Engine No. 1174 G. When made 1943

Donkey Boilers made at

Belfast

By whom made

Harland & Wolff. Ltd.

Boiler No. 1174 G. When made 1943

Brake Horse Power 3600 (max.)

Owners

Anglo Saxon Petroleum Co. Ltd.

Port belonging to

London.

Nom. Horse Power as per Rule 502

Is Refrigerating Machinery fitted for cargo purposes

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 S.A.

Maximum pressure in cylinders 700 lb.

Diameter of cylinders 25 3/8 650 mm.

Length of stroke 14.80 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 built

dia. of journals as per Rule Appd. 460 mm
as fitted 460 mm

Crank pin dia. 460 mm
Bred 134"

Crank Webs

Mid. length breadth 800 mm
Mid. length thickness 267 "

Thickness parallel to axis 267 mm
Thickness around eye-hole 235 "

Flywheel Shaft, diameter as per Rule as fitted

Intermediate Shafts, diameter as per Rule as fitted

19"

Thrust Shaft, diameter at collars as per Rule as fitted

Appd. 18"

Tube Shaft, diameter as per Rule as fitted

Screw Shaft, diameter as per Rule as fitted

18"

Is the screw shaft fitted with a continuous liner

yes

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

Appd. 2 3/8

Thickness between bushes as per Rule as fitted

Appd. 3 3/4

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'-6"

Pitch 12'-0"

No. of blades 4

Material Bronze

whether Moveable

no

Total Developed Surface 75 sq. feet

Method of reversing Engines Direct

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

yes

Means of lubrication

forced

Thickness of cylinder liners 48 to 40 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

Cooling Water Pumps, No. 4

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 tons per hour

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

32 tons per hour

How driven

Main Engine

Steam

General service pump

100 tons per hour

Steam

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 80 tons/hour, steam 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

P. 3 1/2", S 3 1/2", Aft well 4", Cofferdam 2 1/2"

In Pump Room

In Holds, &c.

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

ten 6", one 4", O.F. transfer pump suction from gutterways P & S 2 1/2"

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 struts

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

yes

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

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

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.

yes

No. of stages

yes

Diameters one 120 hp free air per min. 6350 ft.

Stroke

Driven by

Steam engine

Auxiliary Air Compressors, No. 2

No. of stages

2

Diameters

90 "

Stroke

Driven by

Aux. engine

Small Auxiliary Air Compressors, No.

No. of stages

yes

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Steam driven compressor

Driven by

Scavenging Air Pumps, No.

yes

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

4 VPB Type Ruston & Hornby Diesel Engine, driving air compressor & 30 K.W. Generator. 90 lighting only.

No. One. Position Engine room. Start. Fuel.

Is a report sent herewith

003307-003310-0031

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Foundation

AIR RECEIVERS: — Have they been made under survey *yes* State No. of Report or Certificate *Belfast. 2.1069*
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. *one* Total cubic capacity *500 cu. ft.* Internal diameter *6'-0 5/16"* thickness *Shells, 1" 1 1/2" 1 3/4"*
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *28/32 ton* Working pressure *by Rules 356 lb Actual 356 "*
IS A DONKEY BOILER FITTED? *yes (2)* If so, is a report now forwarded? *yes. Belfast Rpt. No. 13589*
Is the donkey boiler intended to be used for domestic purposes only *no*
PLANS. Are approved plans forwarded herewith for Shafting *yes* Receivers *(Belfast)* Separate Fuel Tanks *✓*
Donkey Boilers *✓ (Belfast)* 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 attached list. (under separate cover)*

The foregoing is a correct description.

Wm. J. Wright.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- *1942 Sep 8-24 Oct 28 Nov 24 Dec 22 1943 Feb 16-22 Mar 5-9-18-Apr 13-15-19-28 May 10-12-19 Jun 2-4-9-10-11-14-15-16*
During erection on board vessel -- *17-18-22-24-30- July 13-14-15-19-23-26-28-29 Aug 13-16-17-27-30-31 Sep 1-2-3-7-9-30 Oct 5-13-16-17-20-24-25-26-27-29 Nov 2-3*
Total No. of visits *81*

Dates of Examination of principal parts — Cylinders *17-6-43* Covers *17-6-43* Pistons *24-6-43* Rods *24-6-43* Connecting rods *23-7-43*
Crank shaft *15-4-43* Flywheel shaft *✓* Thrust shaft *15-4-43* Intermediate shafts *16-8-43* Tube shaft *✓*
Screw shaft *13-8-43* Propeller *13-8-43* Stern tube *13-8-43* Engine seatings *26-7-43* Engines holding down bolts *3-11-43*
Completion of fitting sea connections *30-8-43* Completion of pumping arrangements *2-12-43* Engines tried under working conditions *3-12-43*
Crank shaft, Material *Steel* Identification Mark *Lloyd's 1174 P.9.* Flywheel shaft, Material *✓* Identification Mark *✓*
Thrust shaft, Material *Steel* Identification Mark *Lloyd's S.6059 P.9.* Intermediate shafts, Material *Steel* Identification Marks *Lloyd's S.6379 P.9.*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *Lloyd's 6928 P.9.*
Identification Marks on Air Receivers *No. 256. Lloyd's test 556 lb. R.S. 2-7-43.*

Steam Pipes *Bessemer Steel. Flanges stamped accordingly. Pipes taken from stock. See Glasgow letter 18-11-43.*

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 *no* If so, state name of vessel *Generally similar to "San Vulfrano" 94. 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 condition with satisfactory results.
The machinery is eligible in my opinion to be classed in the Register Book with notations of *1- LMC 12.43. C.L. 2 D.B. W.P 180 lb.*

The amount of Entry Fee .. £ *6* : - : When applied for,
Special £ *100* : *2* : *21 DEC 1943*
Donkey Boiler Fee £ : : When received,
Travelling Expenses (if any) £ : : 19.

Committee's Minute *GLASGOW 21 DEC 1943*

Assigned *1- LMC 12.43 all Eng 2 D.B. 180 lb.*

P. Fitzgibbon, S. E. Murdoch.
Engineer Surveyor to Lloyd's Register of Shipping.



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