

REPORT ON OIL ENGINE MACHINERY.

No. 96422
JUL - 9 1938

Received at London Office

to of writing Report

When handed in at Local Office

8171, 38

Port of

NEWCASTLE-ON-TYNE

o. in Survey held at
g. Book.

Newcastle-on-Tyne.

Date, First Survey 27 Sept/37

Last Survey 7th July 1938.

Number of Visits 84

Single
on the ~~Two~~
Triple
Screw vessel

"SAN DELFINO"

Tons
Gross
Net

uilt at Haverton Hill - on - Tyne. By whom built Messrs Furness Shipbuilding Co Ltd Yard No. 283 When built 1938.

Engines made at Newcastle-on-Tyne (S.P. & Co.) by whom made Messrs R.W. Hawthorn Leslie & Co Ltd Engine No. 3941 When made 1938.

Monkey Boilers made at Newcastle-on-Tyne (S.P. & Co.) by whom made Messrs R.W. Hawthorn Leslie & Co Ltd Boiler No. 3941 When made 1938.

ake Horse Power 3500 Owners Eagle Oil & Shipping Co Ltd Port belonging to London.

om. Horse Power as per Rule 502. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.

rade for which vessel is intended Ocean Going. Carrying Petroleum in Bulk.

L ENGINES, &c. Type of Engines Workshop Supercharged. 2 or 4 stroke cycle 4 Single or double acting Single

azimium pressure in cylinders 700 lbs/sq in Diameter of cylinders 650 mm Length of stroke 1400 mm No. of cylinders 8 No. of cranks 8.

ean Indicated Pressure 135 lbs/sq in

an of bearings, adjacent to the Crank, measured from inner edge to inner edge 844 mm Is there a bearing between each crank Yes.

volutions per minute 120 Flywheel dia. 2260 mm Weight 6000 kgs. Means of ignition Compression Kind of fuel used Diesel Oil.

rank Shaft, dia. of journals as per Rule 448 mm as fitted 460 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 870 mm Mid. length thickness 267 mm Thickness parallel to axis 267 mm x 290 mm Thickness around eye-hole 204 mm

lywheel Shaft, diameter as per Rule 448 mm as fitted 460 mm 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 mm

abe Shaft, diameter as per Rule 358 mm as fitted 443 mm Is the screw shaft fitted with a continuous liner Yes.

ronze Liners, thickness in way of bushes as per Rule 17.5 mm as fitted 19 mm Thickness between bushes as per rule 13.1 mm as fitted 15 mm Is the after end of the liner made watertight in the

opeller boss Yes. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Continuous.

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.

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

ft No If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 1610 mm.

opeller, dia. 15' 9" Pitch 11' 3" No. of blades 4. Material M. Bronze whether Moveable Solid Total Developed Surface 80 sq. feet

ethod of reversing Engines Sewomotor Is a governor or other arrangement fitted to prevent racing of the engine when detached 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

-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 Yes

oling Water Pumps, No. 2. 1- Rotary on Main Eng. 1- Steam Centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

ge Pumps worked from the Main Engines, No. 2. Diameter Rotary Stroke Can one be overhauled while the other is at work Yes.

mps connected to the Main Bilge Line No. and Size 2. Rotary 35 tons/hr. one 8" x 8" x 10" How driven Main Engine Steam.

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

angements.

llast Pumps, No. and size one 8" x 8" x 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one Standby 8" x 8" x 10" (Steam)

two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

mps, No. and size:—In Machinery Spaces In Pump Room

Holds, &c.

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

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

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

re they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

re they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

hat pipes pass through the bunkers How are they protected

hat pipes pass through the deep tanks Have they been tested as per Rule

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

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

mpartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

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

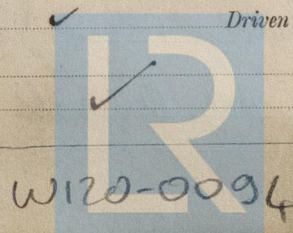
ain Air Compressors, No. none No. of stages Diameters Stroke Driven by

uxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

mall Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

avenging Air Pumps, No. none Diameter Stroke Driven by

uxiliary Engines crank shafts, diameter as per Rule as fitted No. Position



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AIR RECEIVERS:—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.*
High Pressure 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 *✓*
Starting Air Receivers, No. *Two* Total cubic capacity *800 cu. ft.* Internal diameter *4'-10 7/8"* thickness *27/32"*
Seamless, lap welded or riveted longitudinal joint *T.R.D.B.S.* Material *Steel* Range of tensile strength *28-32 tons* Working pressure by Rules *372 lbs 10"*
ends 26-30 tons Actual *350 lbs 10"*
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 Shifting *Crank Shaft 1-6-37* *Yes.* Receivers *Yes.* Separate Fuel Tanks *Yes.*
(If not, state date of approval)
Donkey Boilers *Yes.* General Pumping Arrangements *✓* Pumping Arrangements in Machinery Space *✓*
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 attached list.*

The foregoing is a correct description.

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

Manufacturer.

Dates of Survey while building
During progress of work in shops—*1937*
Sep. 27, 6 Oct. 7, 12, 15, 22, 26, 27, 28 Nov. 1, 3, 10, 12, 23 Dec. 7, 16, 20, 21, 24, 30. 1938
During erection on board vessel—*9, 14, 22, 23, 24, 26, 4 Mar. 1, 9, 10, 14, 15, 17, 18, 21, 22, 24, 25, 28, 30, Apr. 1, 4, 5, 6, 8, 11, 12, 14, 20, 21, 22, 25, 26, 28*
Total No. of visits *84*
May 5, 6, 9, 10, 11, 12, 13, 18, 20, 23, 24, 26, 30, 31, June 2, 3, 6, 7, 9, 14, 15, 16, 27, 29, July 1, 5, 7.

Dates of Examination of principal parts—Cylinders *21-4-38* Covers *21-4-38* Pistons *15-3-38* Rods *17-3-38* Connecting rods *17-3-38*

Crank shaft *10-5-38* Flywheel shaft *20-5-38* Thrust shaft *30-12-37* Intermediate shafts *7-6-38* Tube shaft *✓*

Screw shaft *2-6-38* Propeller *7-6-38* Stern tube *2-6-38* Engine seatings *✓* Engines holding down bolts *✓*

Completion of fitting sea connections *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *✓*

Crank shaft, Material *Steel* Identification Mark *1043* Flywheel shaft, Material *Steel* Identification Mark *1079*

Thrust shaft, Material *Steel* Identification Mark *5545* Intermediate shafts, Material *Steel* Identification Marks *5590*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *5578*

Is the flash point of the oil to be used over 150° F. *✓* *Share 5546.*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *✓*

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 (Main Eng only) *"ANCYLUS" No. RN 92146.*

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

The Engine has been built under Special Survey in accordance with the Society's Rules and approved plans.

The materials and workmanship are good.

The Engine has been sent to Messrs Furness I.B. & Ltd Haverton Hill-on-Dees to be fitted on board.

NHP 502 1st Entry £6-0-0. } Newcastle of.
2/3 of £100-2 - - - - £66-14-0
1/3 of £100-2 - - - - £33-8-0 Middlesbrough of.

The amount of Entry Fee .. £ *6* : - : When applied for *8 JUL 1938*
Special ... £ *100* : *2* :
Donkey Boilers Fee ... £ *25* : *18* : When received, *12/7 1938*
AIR RECEIVERS
Travelling Expenses (if any) £ *8* : *8* :

Committee's Minute *TUE 18 OCT 1938*
Assigned *See minute on R. machinery.*



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