

RECEIVED

4 APR 1944

REPORT ON OIL ENGINE MACHINERY.

No 101940

1 APR 1944

Received at London Office

Date of Survey Report

27 MAR 1944

When handed in at Local Office

7 MAR 1944

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

Newcastle on Tyne

Date, First Survey

13th April, 1943

Last Survey

22nd February, 1944

Reg. Book.

Number of Visits

90

Single
on the Twin Screw vessel
Triple
Quadruple"PORT MACQUARIE."

Tons

GROSS 9071.80
NET 5485.32

Built at

Newcastle (WallSEND)

By whom built

Swan, Hunter,
& Wigham Richardson Ltd

Yard No. 1685

When built 1944

Engines made at

(Walker)

By whom made

Ditto

Engine No. 1760

When made 1944

Donkey Boilers made at

Ammann

By whom made

Cochran & Co (Ammann) Ltd

Boiler No. 15416

When made

Brake Horse Power

6,600

Owners

The Port Line

Port belonging to London

Nom. Horse Power as per Rule

1291

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which vessel is intended

Open sea service

OIL ENGINES, &c. Type of Engines Swan, Hunter - Doreford opposed piston 2 or 4 stroke cycle 2. Single or double acting Single

Maximum pressure in cylinders

640 lb

Mean Indicated Pressure

87 lb

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

1044 mm

Revolutions per minute

115

Crank Shaft, { Solid forged
Semi built
All builtdia. of journals as per Rule 493
as fitted 530Crank pin dia. 530
with 175 mm central holeCrank Webs Mid. length breadth 754 mm
Mid. length thickness 300 mm

Thrust Shaft, diameter at collars as fitted 500 mm

Flywheel Shaft, diameter as fitted 460 mm

Intermediate Shafts, diameter as fitted 16 1/2

Tube Shaft, diameter as per Rule
as fitted 17.38Screw Shaft, diameter as per Rule
as fitted 18 1/2Bronze Liners, thickness in way of bushes as per Rule
as fitted 26 1/2

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

tight fit

Is the after end of the liner made watertight in the

propeller boss

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

Yes

Length of Bearing in Stern Bush next to and supporting propeller

6'10"

Propeller, dia. 18'0"

Pitch 14'3"

No. of blades 4

Method of reversing Engines

compressed air

by hand lever

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

Yes

Means of lubrication

Forced

Thickness of cylinder liners 25 mm

Are the cylinders fitted with safety valves

Cooling Water Pumps, No. 2

for Piston & Jacket cooling (Distilled water)

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. nil

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and Size

One Bilge P. 135 tons/hr & one Ballast P. 250 tons/hr

How driven

Elec motor

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 of 250 tons/hr

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

2 of 66 tons/hr each

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 4 of 3 1/2", 4 of 2" for oil bilges; Tunnel well 1 of 2 1/2"

In Pump Room

In Holds, &c. nil

No. 1 Hold, 2 of 3 1/2"; No. 2 Hold, 2 of 3 1/2"; No. 3 Hold, 2 of 3 1/2"; No. 4 Hold, 2 of 3 1/2"; No. 5 Hold, 2 of 3 1/2"

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

2 of 6" dia

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 all Sea Connections fitted direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Yes

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

How are they protected

Both

What pipes pass through the bunkers

What pipes pass through the deep tanks

nil

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

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

Yes

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

No

worked from

Main Air Compressors, No. nil

No. of stages

Auxiliary Air Compressors, No. 2

No. of stages 3

Diameters

Stroke

Driven by

Elec. motors

Small Auxiliary Air Compressors, No. 1

No. of stages 2

Diameters

What provision is made for first Charging the Air Receivers

Small Steam-driven Compressor

Scavenging Air Pumps, No. One Dble acting

Diameter 1852 mm

Stroke 1480 mm

Driven by

main engine

crank shaft

Auxiliary Engines crank shafts, diameter as per Rule

Have the Auxiliary Engines been constructed under special survey

Yes

Is a report sent herewith

Yes

Copies attached

C.1837 & C.1838

Register

Foundation

C.1837 & C.1838

30. May. 4. 11. 21.

29.

98

014287-014299-0359

AIR RECEIVERS: - Have they been made under survey. *Yes.* ✓ State No. of Report or Certificate ✓
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 by Rules
Starting Air Receivers, No. *2.* ✓ Total cubic capacity *350 cub. ft.* Internal diameter *5'0"* ✓ thickness *1 9/32"*
~~Seamless, lap welded or riveted longitudinal joint~~ *T.R. Dike butt straps.* Material *M. Stl.* Range of tensile strength *30 to 34 tons* Working pressure by Rules *604 lbs/sq. in.*
Actual *600.*

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 *Or. Sh. 13-3-42* ✓ Receivers *21-12-42* ✓ Separate Fuel Tanks *26-6-43* ✓
(If not, state date of approval) *TS. etc. 1-7-42*
Donkey Boiler *Elc. Rpt 66953* ✓ General Pumping Arrangements *27-8-42* ✓ Pumping Arrangements in Machinery Space *1-12-42.* ✓
Oil Fuel Burning Arrangements *10-9-43.* ✓

SPARE GEAR.
Has the spare gear required by the Rules been supplied *Yes.* ✓
State the principal additional spare gear supplied *1 Main Piston Head, 1 upper + 1 Lower Piston Rods, 2 Skirts for Lower Pistons (1 light & 1 heavy), 1 Skirt for Upper Piston, 1 set Top end Bearings for Scavenge Pump, 1 Relief Valve for ME Cylinders, 1 set Ball Brgs + Roller Brgs for Camshaft drive.* ✓

The foregoing is a correct description. *M. H. Lane*
SWAN, HUNTER, & WILKINSON RICHARDSON, LTD. Manufacturer.

Dates of Survey while building
During progress of work in shops - *1942*
During erection on board vessel - *APR. 13-14-16-23. JUNE 4-8-9-10-17-18-21-23-24-25-29-30. JULY 16-19-21-23-27-28-29. AUG. 14-16-19-20-24. SEPT. 3-9-10-13-14-15-17-20-21-22-30.*
Total No. of visits *90*
Dates of Examination of principal parts - Cylinders *12th to 19th Oct. 43.* Pistons *12th + 17th* Rods *as Pistons* Connecting rods *23-11-43*
Crank shaft *21-9-43* Flywheel shaft *as Cr. Sh.* Thrust shaft *as Cr. Sh.* Intermediate shafts *16-8-43* Tube shaft ✓
Screw shaft *17-6-43* Propeller *17-6-43* Stern tube *29-7-43* Engine seatings *27-7-43* Engines holding down bolts *11-1-44*
Completion of fitting sea connections *19-8-43* Completion of pumping arrangements *18-2-44* Engines tried under working conditions *12th to 24th*
Crank shaft, Material *7 Stl.* Identification Mark *11747 LCD.* Flywheel shaft, Material *7 Stl.* Identification Mark *as Cr. Sh.*
Thrust shaft, Material *7 Stl.* Identification Mark *11747 LCD.* Intermediate shafts, Material *7 Stl.* Identification Marks *12485 HAI.*
Tube shaft, Material ✓ Identification Mark ✓ *17-3-43* Screw shaft, Material *7 Stl.* Identification Mark *12485 HA.*

Identification Marks on Air Receivers
Two Starting Air Receivers: **LLOYD'S TEST**
WT 800 LBS
WP 600 LBS
16-7-43 AW AW
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 *Steam fire extinguisher under Vent. Donk. Blr. in E.R. Comp. Ten - 2 gall. Extinguishers.*
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *No.* ✓ 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 desired* ✓
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. *The machinery of this vessel has been constructed under Special Survey in accordance with the approved plans and the Society's Rules, installed satisfactorily and tried under working conditions with good results. The materials and workmanship are good. The machinery of this vessel is eligible, in my opinion, for record + L.M.C. 2.44, and the notations TS.CL., D.B. 105 lb WP, OIL ENG.*

The amount of Entry Fee *£ 6 : 0 : 0* ✓ When applied for, *30 MAR 1944*
Special *£ 12 : 12 : 0* ✓
Elc. Welded Constr. *£ 4 : 4 : 0* ✓
Donkey Boiler Fee *£ 4 : 4 : 0* ✓
2 Starting Air Receivers (175 cub. ft.)
Travelling Expenses (if any) *£ 19 : 0 : 0* ✓
When received, *19*

Committee's Minute *FRI. 21 APR 1944*
Assigned *+ L.M.C. 2.44 O.L. Oil Eng DB-105 lb*

