

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 97437

Received at London Office

MAY 11 1939

NEWCASTLE-ON-TYNE

Date of writing Report

When handed in at Local Office

10/5/39 Port of

No. in Survey held at  
Reg. Book.

Newcastle on Tyne

Date, First Survey 27 July

Last Survey 4/5/1939

Number of Visits 78

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

"BRITISH INFLUENCE"

Tons { Gross 8431  
Net 4855

Built at

Newcastle S.H.D.

By whom built

Swan Hunter &amp; Wigham Richardson Ltd

Yard No. 1594 When built 1939

Engines made at

do

By whom made

do

Engine No. 1592 When made 1939

Donkey Boilers made at

do

By whom made

do

Boiler No. 1594 When made 1939

Brake Horse Power

2850

Owners British Tanker Co.

Port belonging to LONDON

Nom. Horse Power as per Rule

687

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes

Trade for which vessel is intended

Ocean going

23 7/8"

9 1/2"

L. ENGINES, &amp;c.

Type of Engines

Opposed piston (Dorland) Type

2 or 4 stroke cycle

2 Single or double acting

Single

Maximum pressure in cylinders

570 lb

Diameter of cylinders

600 in

Length of stroke

upper 980  
lower 1340

No. of cylinders

4

No. of cranks

4 three throws

Mean Indicated Pressure

84 lb

Centres of side rods

1200 mm

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

940 mm

Is there a bearing between each crank

Yes, between each 3-throw

Revolutions per minute

97

Flywheel dia.

2050 mm

Weight

88 "

Means of ignition

Compression

Kind of fuel used

Heavy oil

Crank Shaft, dia. of journals

as fitted 425

Crank pin dia.

450

Crank Webs

Mid. length breadth

650

Mid. length thickness

255

Thickness parallel to axis

255

Thickness around eye-hole

200

Flywheel Shaft, diameter

as fitted 425

Intermediate Shafts, diameter

as fitted 16 1/2

Thrust Shaft, diameter at collars

as fitted 425

as fitted 450

Stern Shaft, diameter

as per Rule

Screw Shaft, diameter

as per Rule

as fitted 14.24

as fitted 16 1/2

Is the shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule

as fitted 23.5/32

Thickness between bushes

as per Rule

as fitted 9/16

Is the after end of the liner made watertight in the

Yes

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

one length

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

light put

two liners are fitted, is the shaft lapped or protected between the liners

Yes

Propeller, dia.

16' 9"

Pitch

Variable

No. of blades

4

Material

Brass

whether Moveable

No

Total Developed Surface

91

sq. feet

Method of reversing Engines

hand lever

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

Yes

Means of lubrication

hand &amp; forced

Thickness of cylinder liners

25 mm

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

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 up funnel

Cooling Water Pumps, No.

1 main &amp; 1 stand by

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 Bilge Line

No. and Size

one 10" x 12" x 10" Duplex

Stroke

8 two 7" x 8" x 8" Duplex

each 100 tons/hr.

all Steam driven

Pumps connected to the Main Bilge Line

No. and Size

How driven

one 10" x 12" x 10" Duplex

Stroke

8 two 7" x 8" x 8" Duplex

each 100 tons/hr.

all Steam driven

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

one 10" x 12" x 10" Duplex (in ER)

one 8" x 8" x 10" "in Pump Room"

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

one 8" x 7" x 18" Stand by

one 8" x 7" x 18" Stand by

one 8" x 7" x 18" Stand by

one 8" x 7" x 18" Stand by

one 8" x 7" x 18" Stand by

one 8" x 7" x 18" Stand by

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 of 3 1/2" also 2-2 1/2" of gutterway &amp; 1-2 1/2" from ER Cofferdam

In Pump Room

2 of 4"

one 1 1/2" ejector

Holds, &amp;c.

2 fore Cargo Holds

2 of 2 1/2" &amp; 2 of 2"

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

two 6"

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

Yes

Are the Bilge Suctions in the Machinery Spaces

Yes

Are they fitted with Valves or Cocks

Yes both

Are the Overboard Discharges above or below the deep water line

Yes both

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

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

Is it fitted with a watertight door

Yes

worked from

Yes

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

None

Main Air Compressors, No.

None

No. of stages

Diameters

Stroke

Driven by

auxiliary Air Compressors, No.

2

No. of stages

3

Diameters

Stroke

Small Auxiliary Air Compressors, No.

None

No. of stages

Diameters

Stroke

Driven by

exhausting Air Pumps, No.

One

Diameter

1960 mm

Stroke

610 mm

Driven by

by levers

auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No.

Position

one 30 KW. oil by Dyno

one 30 KW. Steam

one 8 KW. Steam

all on Start

Side in E.R.

W560

0/28

Foundation



**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 *✓*  
**Starting Air Receivers, No.** *2* Total cubic capacity *280 cub. ft* Internal diameter *4' 1 1/2"* thickness *1 3/32"*  
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *29-33 tons* Working pressure *by Rules 602 lb. Actual 600 lb.*

**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. For Steam driven Auxiliaries etc*

**PLANS.** Are approved plans forwarded herewith for Shifting *No. 3/6/37* Receivers *10/1/26 for 1498* Separate Fuel Tanks *26/8/36 for 15*  
*15/11/35 & 23/11/35* (If not, state date of approval) *26/8/36 for 1514* *British Resolution*  
Donkey Boilers *for 1498* General Pumping Arrangements *24/4/36 for 1498* Pumping Arrangements in Machinery Space *11/2/28 for 14*  
Oil Fuel Burning Arrangements *✓* also *29/4/38 for 1592-4*

**SPARE GEAR.**

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

State the principal additional spare gear supplied  
*One Cylr liner & jacket complete*  
*one Starting Air non-return valve complete*  
*one Cylr Relief Valve complete*  
*4 Scavenge pump Suction & delivery half discs*  
*2 Fuel pump bodies complete with Suction & delivery valves*  
*1 intermediate crosshead with struts & bolts*  
*1 bell crank lever & suction tappet for fuel pump*  
*4 fuel valves complete*  
*1 roller chain for cam shaft drive*  
*1 set of thrust pads*  
*1 - six feed T & K lubricator for Cyl*  
*1 propeller shaft (fitted with CL) & nut*  
*2 feed check valve lids*  
*12 boiler tubes & 1 S.V. Sp*  
*1 set of Caps for feed water*  
*1 " " for forced lub. oil*  
*1 nest of tubes for distilled water*  
*1 nest of tubes for lub. oil cooling*  
*etc.*

The foregoing is a correct description.

**SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.**

Manufacturer.

**Dates of Survey while building**  
During progress of work in shops - *1937 July 27, Dec. 20. 1938 Jan. 17, Mar. 23, Apr. 20, Sep. 22, 26, Oct. 5, 8, 12, 15, 22, 23, 24, 28, 30, 31, Nov. 3, 8*  
During erection on board vessel - *15, 18, 21, 22, 23, 25, 29, Dec. 2, 6, 8, 9, 12, 20, 28, 30, 1939 Jan. 5, 6, 10, 12, 13, 18, 23, 30, 31, Feb. 7, 9, 13, 14, 16*  
Total No. of visits *78*

**Dates of Examination of principal parts**—Cylinders *24/1/39* Covers *✓* Pistons *23/1/39* Rods *16/1/39* Connecting rods *13/1/39*  
Crank shaft *21/1/39* Flywheel shaft *21/1/39* Thrust shaft *21/1/39* Intermediate shafts *16/2/39* Tube shaft *✓*  
Screw shaft *23/1/39* Propeller *20/2/39* Stern tube *13/2/39* Engine seatings *1/3/39* Engines holding down bolts *17/3/39*  
Completion of fitting sea connections *20/2/39* Completion of pumping arrangements *✓* Engines tried under working conditions *✓*

**Crane shaft, Material** *Steel* Identification Mark *50. 4520* Flywheel shaft, Material *Steel* Identification Mark *As Crane shaft*  
**Thrust shaft, Material** *Steel* Identification Mark *As crankshaft* Intermediate shafts, Material *Steel* Identification Marks *7874 HA*  
**Tube shaft, Material** *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *7874 HA*

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 *✓*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *British Tenacity. Yard No 1592*

**General Remarks** (State quality of workmanship, opinions as to class, &c.) *The machinery has been constructed under Special Survey in accordance with the Rules and approved plans, and the materials and workmanship are good. The machinery has been satisfactorily installed on board, tested under working conditions and the vessel is eligible in my opinion for record + LMC. 5.39.*

The amount of Entry Fee .. £ *6* : - :  
Special ... £ *109* : *7* :  
2 Donkey Boilers Fee *14-0-0*  
2 Starting Air Receivers *10-2-0*  
Travelling Expenses (if any) *2-0-0*  
Elas Welded Construction *12-12-0*  
Committee's Minute *TUE 23 MAY 1939*

When applied for, *10 MAY 1939*

When received, *20. 5. 1939*

*A. C. Watt*

Engineer Surveyor to Lloyd's Register of Shipping.



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