

## REPORT ON OIL ENGINE MACHINERY.

No. 53775

29 OCT 1945

Received at London Office

31 OCT 1946

Date of writing Report 17 October 1946 When handed in at Local Office

Port of

HULL

No. in Survey held at Gainborough

Date, First Survey 29 October 1945 Last Survey 17 October 1946

Reg. Book.

Number of Visits 5

on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> ~~Quadruple~~ Screw vessel T.R.V. 8.Tons { Gross 193  
Net 59

Built at Gainborough

By whom built J. P. Watson (Gainborough) Ltd Yard No. 1551 When built 1946/10

Engines made at Keighley

By whom made H. Widdop &amp; Co Ltd

Engine No. 4380 When made 1946

Donkey Boilers made at ✓

By whom made ✓

Boiler No. ✓ When made ✓

Brake Horse Power 300 ✓

Owners The Admiralty

Port belonging to ✓

Nom. Horse Power as per Rule 139

Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted ✓

Trade for which vessel is intended Torpedo Recovery.

OIL ENGINES, &c.—Type of Engines <sup>Oilless injection. Heavy oil. See Repts. F.E. Reports</sup> <sup>No. 166 of July 1946 for Main Engines and</sup> <sup>No. 167 and 168 " " Auxiliary engine Attached hereto.</sup> 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

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

Is there a bearing between each crank

Revolutions per minute 350

Flywheel dia.

Weight

Means of ignition

Kind of fuel used

Crank Shaft, { Solid forged  
Semi built dia. of journals  
All builtas per Rule  
as fitted

Crank pin dia.

Crank Webs

Mid. length breadth  
Mid. length thickness

shrunk

Thickness parallel to axis  
Thickness around eyehole

Flywheel Shaft, diameter

as per Rule  
as fitted

Intermediate Shaft, diameter

as per Rule  
as fitted

Thrust Shaft, diameter at collars

as per Rule  
as fitted

Tube Shaft, diameter

as per Rule  
as fitted

Screw Shaft, diameter

as per Rule  
as fittedIs the { tube  
screw } shaft fitted with a continuous liner { No.

Bronze Liners, thickness in way of bushes

as per Rule  
as fitted

Thickness between bushes

as per Rule  
as fitted

Is the after end of the liner made watertight in the

propeller boss

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 ✓ If so, state type Widdop's Drawing 3536 of 27.10.41

Length of Bearing in Stern Bush next to and supporting propeller 17 1/4"

Propeller, dia. 56"

Pitch 43"

No. of blades 4

Material C.I.

whether Moveable Solid

Total Developed Surface

9 sq. feet

Method of reversing Engines Direct

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

Means of lubrication

Forced. Thickness of cylinder liners

Are the cylinders fitted with safety valves ✓

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine up funnel.

Cooling Water Pumps, No. 1 M.E. driven 4 1/4" dia x 3" stroke (working)

Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Bilge Pumps worked from the Main Engines, No. 1

Hamworthy 32 t.p.h. (Hand Lg)

Diameter 4 1/4"

Stroke 3"

Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line

No. and Size 1 Main Engine driven 4 1/4" dia x 3" stroke — 1, Hamworthy self priming by Auxiliary 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

Ballast Pumps, No. and size 1, Hamworthy 32 t.p.h. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1, 166

Are two independent means arranged for circulating water through the Oil Cooler ✓

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces 3, 2 1/2" dia. of which one is direct to Hamworthy pump

In Pump Room

In Hold, &amp;c. 3, 2 1/2" dia.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One - 2 1/2" dia.

Are all the Bilge Suction pipes in Hold and Tanker Well fitted with strum-boxes ✓

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 ✓

Are all Sea Connections fitted direct on the skin of the ship ✓

Are they fitted with Valves or Cocks Cocks

Are 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 above.

Are 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 None fitted.

What pipes pass through the bunkers 3, 2 1/2" hold bilge suction — 1, 1 1/2" fuel oil suction — 1, 1 1/2" galley suction

How are they protected Not 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 ✓

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 ✓

Is the Shaft Tunnel watertight None fitted

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. 1, 166

No. of stages 2

Diameters 6" - 2.75"

Stroke 3"

Driven by Main Engine

Auxiliary Air Compressors, No. 1

No. of stages 2

Diameters 6" - 2.75"

Stroke 3"

Driven by Auxiliary

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers. Aux. eng. driving aux. air compressor — Hand starting.

Scavenging Air Pumps, No. Under side of pistons

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule  
as fitted

See Repts. 167 and 168, attached hereto

No.

Position

Have the Auxiliary Engines been constructed under special survey

Yes

Is a report sent herewith ✓

011316-011329-0187

**AIR RECEIVERS:**—Have they been made under survey Yes ✓ State No. of Report or Certificate See below.  
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 Actual ✓  
**Starting Air Receivers, No.** Two ✓ Total cubic capacity 14.5 cu. ft. ✓ Internal diameter 12 1/2" ✓ thickness 1/4" ✓ See Rule No. 166  
Seamless, lap welded or riveted longitudinal joint Seamless ✓ Material Steel ✓ Range of tensile strength ✓ Working pressure by Rules Actual 350 lb. ✓  
586.5.618

**IS A DONKEY BOILER FITTED?** No ✓ If so, is a report now forwarded? ✓  
Is the donkey boiler intended to be used for domestic purposes only ✓

**PLANS.** Are approved plans forwarded herewith for Shafting 9.12.43. Receivers 9.12.43. Separate Fuel Tanks ✓  
(If not, state date of approval)  
Donkey Boilers ✓ 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 See list attached hereto

Air Receivers:

Starting Air

Starting Air

Whistle

C.T. Co. 54593.  
Rogers Test.  
1000 lb.  
W.P. 350 lb.  
Onld. 12.5.41  
Totld. 14.5.41

C.T. Co. 54587.  
Rogers Test.  
1000 lb.  
W.P. 500 lb.  
Onld. 13.2.41  
Totld. 4.4.41

43-81-42.  
Rogers Test.  
1000 lb.  
W.P. 400 lb.  
18.6.43  
D. 11.5.5 JMB

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } See Records Reports attached hereto.  
{ During erection on board vessel -- } 1945. Oct. 29. Nov. 23. 1946. Aug. 7. Oct. 17. - 5 Visits.  
Total No. of visits

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓  
Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓  
Screw shaft Totld. 29.10.45 Propeller Totld. 29.10.45 Stern tube 29.10.45 Engine sealings 29.10.45 Engines holding down bolts 7.8.46  
Completion of fitting sea connections 29.10.45 Completion of pumping arrangements 1.10.46 Engines tried under working conditions 1.10.46 and 17.10.46  
Crank shaft, Material ✓ Identification Mark ✓ Flywheel shaft, Material ✓ Identification Mark ✓ LLOYDS 505 DRW. 21.6.46  
Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shaft, Material 2.2.46 Identification Mark ✓ LLOYDS 830 DRW. 14.2.45  
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material 2.2.46 Identification Mark ✓  
Identification Marks on Air Receivers See above.

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 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 No ✓  
Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel T.R.V. 6 and T.R.V. 7. J.P. Watson { 1549 Hull { 1550 }

**General Remarks** (State quality of workmanship, opinions as to class, &c.) Workmanship good.  
This main engine has been specially surveyed during construction. See Record No. 166 of July 1946.  
attached hereto. It has been fitted on board in accordance with the Rules and Specification and satisfactory  
dock and river trials carried out. The machinery of this vessel is eligible in my opinion for  
notation in the Register Book of + L.M.C. 10/46 T.B. O.G. &c. if desired.

Attached hereto: Record Report No. 166 with copy of Nottingham Port C. 1547 for 1. air receiver. D. 11.5.  
" " 167 " " " Generation test Certificate. - 15.11.46  
" " 168 " " " " " 3.5.11.46

Copy of Interim Certificate issued  
for Spare Gear supplied.

The amount of Entry Fee .. £ 29.0.0 When applied for 23 OCT 1946  
Balance Special ... £  
Donkey Boiler Fee ... £  
Travelling Expenses (if any) £  
When received, 19

Committee's Minute

Assigned + L.M.C. 10.46 Oil Eng.  
O.G.

Geo. A. Lang for self and J. Stedman.  
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation