

# REPORT ON OIL ENGINE MACHINERY.

No 124.

Received at London Office

2 JUN 1945

23-5 - 1945 When handed in at Local Office 24-5-1945 Port of

LEEDS.

of writing Report

in Survey held at Keighley

Date, First Survey 28-4-44

Last Survey 20-4-1945

Number of Visits 6

on the ~~Triple~~ Screw vessel

"T.R.V.6."

Tons Gross  
Net

at Gainsborough

By whom built J.S. Watson (Gainsborough) Yard No. 1549 When built 1945

engines made at Keighley

By whom made H. Widdop & Co. Ltd. Engine No. 4374 When made 1945

Boilers made at -

By whom made - Boiler No. - When made -

ake Horse Power 300 ✓

Owners -

Port belonging to -

m. Horse Power as per Rule 139

Is Refrigerating Machinery fitted for cargo purposes -

Is Electric Light fitted Yes

ade for which vessel is intended

ENGINES, &c. Type of Engines Airless injection heavy oil ✓ 2 or 4 stroke cycle 2 Single or double acting Single ✓

Maximum pressure in cylinders 700 lbs/sq.in. ✓ Diameter of cylinders 11,5" ✓ Length of stroke 13,5" ✓ No. of cylinders 6 ✓ No. of cranks 6 ✓

an Indicated Pressure 50,5 lbs/sq.in. ✓

in of bearings, adjacent to the Crank, measured from inner edge to inner edge 16,75" ✓

Is there a bearing between each crank Yes ✓

olutions per minute 350 ✓ Flywheel dia. 34,75" ✓ Weight 14,5" cwt ✓ Means of ignition Compression ✓ Kind of fuel used heavy oil ✓

ank Shaft, { Solid forged as per Rule 6,2" ✓ dia. of journals as fitted 6,75" ✓ Crank pin dia. 6,75" ✓ Crank Webs Mid. length breadth 9" ✓ Mid. length thickness 3,75" ✓ Thickness parallel to axis - ✓ Thickness around eyehole - ✓

Flywheel Shaft, diameter as per Rule 3,9" ✓ as fitted 4, ✓ Intermediate Shafts, diameter as per Rule 4,42" ✓ as fitted 4,5" ✓ Thrust Shaft, diameter at collars as per Rule 4,1" ✓ as fitted 4,75" ✓

be Shaft, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule 4,42" ✓ as fitted 4,5" ✓ Is the shaft fitted with a continuous liner { No. ✓

ronze 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

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

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 -

two liners are fitted, is the shaft lapped or protected between the liners - Is an approved ORFAX or other appliance fitted at the after end of the tube

aft Yes ✓ If so, state type Drg. No. 3536 Approved 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 no Total Developed Surface 9 sq. feet

ethod of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes ✓ Means of lubrication

forced Thickness of cylinder liners 1,125" Are the cylinders fitted with safety valves Yes ✓ Are the exhaust pipes and silencers water cooled or lagged with

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

ooling Water Pumps, No. One 4,25" dia x 3" stroke ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

ilge Pumps worked from the Main Engines, No. One ✓ Diameter 4,25" ✓ Stroke 3" ✓ Can one be overhauled while the other is at work -

umps connected to the Main Bilge Line { No. and Size - How driven -

Is the cooling water led to the bilges - If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping - One Double acting on aux. eng. No. 4213 1 1/2" bore x 3" stroke. ✓

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

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 - In Pump Room -

In Holds, &c. -

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

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

ed 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 -

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 -

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 -

What pipes pass through the bunkers - How are they 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 - 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. One No. of stages 2 Diameters 6" & 2,75" Stroke 3" Driven by Main Engine ✓

Auxiliary Air Compressors, No. One No. of stages 2 Diameters 6" & 2,75" Stroke 3" Driven by Aux. Engine ✓

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

What provision is made for first Charging the Air Receivers Auxiliary air compressor driven by hand started auxiliary engine ✓

Scavenging Air Pumps, No. Underside of pistons Diameter - Stroke - Driven by -

Auxiliary Engines crank shafts, diameter as per Rule 3" 2,21" No. 2 ✓ as fitted 3,25" ✓ 2,25" ✓ Position -

Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes ✓



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AIR RECEIVERS: — Have they been made under survey

Yes

State No. of Report or Certificate

Chesterfield Tube Co. Advice Notes Nos. 4288  
Nottingham Cert. No. C.154

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

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

2 each 7 1/4 cu.ft.

Material

Range of tensile strength

2 @ 12 1/2"

Working pressure

by Rules

Starting Air Receivers, No. 1-3,85 cu.ft.

Total cubic capacity

18,35 cu.ft.

Internal diameter

1 @ 9 7/8"

thickness

3/8" & 5/16"

Seamless, lap welded or riveted longitudinal joint

Seamless Material Mild Steel

Range of tensile strength

28/32 tons

Working pressure

by Rules

Actual 350 lb

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting 9-12-43

(If not, state date of approval)

Receivers

9-12-43

Separate Fuel Tanks

9-12-43

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

The foregoing is a correct description

J. Macneil & Co. Ltd  
Manufacturer.

Dates of Survey while building

During progress of work in shops - -  
During erection on board vessel - -  
Total No. of visits

28-4-44, 24-5-44, 2-2-45, 14-2-45, 20-4-45

Dates of Examination of principal parts—Cylinders

24-5-44

2-6-44

Covers 24-5-44

Pistons 12-2-45

Rods -

Connecting rods 28-4-44

Crank shaft 28-4-44

Flywheel shaft - - - - -

Thrust shaft 28-4-44

Intermediate shafts 6-7-44

Tube shaft -

Screw shaft 2-2-45

Propeller -

Stern tube -

Engine sealings -

Engines holding down bolts -

Completion of fitting sea connections

Completion of pumping arrangements

Engines tried under working conditions

Crank shaft, Material 30/35 T.T. Steel

Identification Mark No. 82 DRW.

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material 30/35 T.T. Steel

Identification Mark No. 2347 DRW.

Intermediate shafts, Material 28/32 T.T.

Identification Marks No. 505 D.

Tube shaft, Material -

Identification Mark -

Screw shaft, Material 28/32 T.T.

Identification Mark No. 829 DRW.

Identification Marks on Air Receivers

Chesterfield Tube Co. - 878560 - 1000 lbs WK. 27-5-42

Chesterfield Tube Co. - 890442 - 1000 lbs LT. 9-5-40

Ruston Hornsby Ltd. - D.1153 - L.T. 1000 lbs J.N.B. 18-6-43

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

Description of fire extinguishing apparatus fitted

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 Watsons Yard No. 1535 (Leeds Repo. No. 57)

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

This engine has been constructed under Special Survey, of tested materials, in accordance with the Secretary's Letters, approved plans and the requirements of the Rules.

The materials and workmanship are good and the engine was found to be satisfactory when tested in the shops under full load conditions.

This engine is suitable, in my opinion, for the purpose intended and when satisfactorily installed and reported will be eligible to receive the notation

L.M.C. (with date)

The amount of Entry Fee

2/3 Special 50% Special 39 : 0

When applied for,

1-5-1945

Donkey Boiler Fee

When received,

7-5-1945

Travelling Expenses (if any)

Committee's Minute

Assigned

See F.E. machy. rpt.

D. Walbury  
Engineer Surveyor to Lloyd's Register of Shipping.



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