

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No 57

Received at London Office

20 MAR 1943

9 AUG 1943

Date of writing Report 12-3-43 When handed in at Local Office 17-3-43 Port of LEEDS.
No. in Survey held at Keighley Date, First Survey 16-10-42 Last Survey 18-2-1943
Reg. Book. Number of Visits 4
on the ~~Sea~~ ^{Single} Screw vessel "T.R.V.5." Tons ^{Gross} ~~Net~~
Built at Gainsborough By whom built J.S. Watson (Gainsborough) Yard No. When built 1943
Engines made at Keighley By whom made H. Widdop & Co. Ltd. Engine No. 4216 When made 1943
Donkey Boilers made at - By whom made - Boiler No. - When made -
Brake Horse Power 300 Owners Port belonging to
Nom. Horse Power as per Rule 139 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted Yes
Trade for which vessel is intended

OIL 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
Mean Indicated Pressure 50.5 lbs/sq. in.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 16.75" Is there a bearing between each crank Yes

Revolutions per minute 350 Flywheel dia. 34.75" Weight 14.5" cwts Means of ignition Compression Kind of fuel used heavy oil

Crank Shaft, { Solid forged ~~as per Rule~~ dia. of journals ~~as fitted~~ 6.75" Crank pin dia. 6.75" Crank Webs Mid. length breadth 9" Thickness parallel to axis -
{ ~~as per Rule~~ ~~as fitted~~ Flywheel Intermediate Shafts, diameter ~~as per Rule~~ 3.9" Thrust Shaft, diameter at collars ~~as per Rule~~ 4.1"
as fitted on crankshaft as fitted 4" as fitted 4.75"

Tube Shaft, diameter ~~as per Rule~~ - Screw Shaft, diameter ~~as per Rule~~ 4.42" Is the ~~shaft~~ shaft fitted with a continuous liner { No
as fitted - as fitted 4.5"

Bronze Liners, thickness in way of bushes ~~as per Rule~~ - Thickness between bushes ~~as per Rule~~ - Is the after end of the liner made watertight in the
as fitted - as fitted -

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 ~~stitching~~ appliance fitted at the after end of the tube

shaft Yes If so, state type Drg. No. 3556 Approved 27-10-41 Length of Bearing in Stern Bush next to and supporting propeller 17.5"
Propeller, dia. 56" Pitch 43" No. of blades 4 Material C.I. whether Moveable no 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 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 -

Cooling Water Pumps, No. One 4.25" dia x 3" stroke the sea suction provided with an efficient strainer which can be cleared within the vessel -

Bilge Pumps worked from the Main Engines, No. One Diameter 4.25" Stroke 3" Can one be overhauled while the other is at work -

Pumps 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

arrangements. - 2 Double acting, one on main engine 1.5" bore x 5" stroke,
one on aux. eng. No. 4216 1.5" bore x 5" stroke.

Ballast Pumps, No. and size - 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
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 -

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 one Diameters 4.5" Stroke 2.75" Driven by Aux. Engine

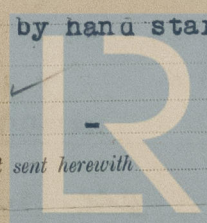
Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

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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011042-011056-0318

AIR RECEIVERS:—Have they been made under survey

Yes

Chesterfield Tube Co. Adv.
Notes CAV.140/2/355/2
State No. of Report or Certificate CAV.(2)321.C.S. and
Nottingham Cert. No. 776

Rpt. 4c.

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

-

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

2-each 7 1/4 cu.ft.

2 @ 12 1/2"

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

18,35 cu.ft. Internal diameter

1 @ 9 7/8"

thickness 1/4" & 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 586 & 618

IS A DONKEY BOILER FITTED?

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 13-11-40 & 27-10-41

13-11-40

Separate Fuel Tanks 4-10-41 & 23-

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,

Manufacturer.

Dates of Survey while building
During progress of work in shops -
During erection on board vessel -
Total No. of visits

16-10-42, 26-10-42, 5-2-43, 18-2-43.

Dates of Examination of principal parts—Cylinders

16-10-42

16-10-42

Covers 26-10-42

Pistons

Rods

Connecting rods 16-10-42

Crank shaft 18-9-42

Flywheel shaft

Thrust shaft

Intermediate shafts

18-2-43

Tube shaft

Screw shaft

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.203 WJF.

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material 30/35 T.T.

Steel

Identification Mark No.887 WJF.

Intermediate shafts, Material 28/32 T.T.

Steel

Identification Marks 18-2-43 D.R.W

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

Identification Marks on Air Receivers

Chesterfield Tube Co. - 878568 - 1000 lbs B.W. 25-8-42 ANLD. 22-3-42

Chesterfield Tube Co. - 54585 - 1000 lbs B.W. 11-5-42 ANLD. 9-5-42

Ruston Hornsby Ltd. - D.987 - L.T. 1000 lbs J.N.B. 23-4-42.

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. 1527 (Leeds Report No. 24)

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 .. £ : : When applied for,
2/3 Special 50% Special 39 : 0 : 17-3-1943
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 19

Committee's Minute

FRI. 20 AUG 1943

Assigned

see minute on sub. J.E. Rpt.

Engine Surveyor to Lloyd's Register of Shipping.



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