

## REPORT ON OIL ENGINE MACHINERY.

No 21492.

23 SEP 1942

of writing Report *21<sup>st</sup> Sept 1942* When handed in at Local Office *22.9.42* Port of *Grimsby*  
 in Survey held at *Gainsborough* Date, First Survey *26-11-41* Last Survey *7th Sept. 1942*  
 Book. Number of Visits *12*

Single  
on the ~~Twin~~ Screw vessel  
Triple  
Quadruple

*"T.R.V.I."*Tons Gross  
Net

It at *Gainsborough* By whom built *J. S. Watson (Gainsborough) Ltd* Yard No. *1527* When built *1942*  
 Lines made at *Heighley* By whom made *H. Widdow & Co., Ltd* Engine No. *4125* When made *1942*  
 Key Boilers made at *✓* By whom made *✓* Boiler No. *✓* When made *✓*  
 ke Horse Power *300* Owners Port belonging to  
 t. Horse Power as per Rule *140* Is Refrigerating Machinery fitted for cargo purposes *✓* Is Electric Light fitted *yes*  
 de 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*  
 mum pressure in cylinders *400 lbs. sq. in.* Diameter of cylinders *11.5"* Length of stroke *13.5"* No. of cylinders *6* No. of cranks *6*  
 Indicated Pressure *50.5 lbs. sq. in.* of bearings, adjacent to the Crank, measured from inner edge to inner edge *16.75"* Is there a bearing between each crank *yes*  
 ations per minute *350* Flywheel dia. *34.75* Weight *15 Cwts.* Means of ignition *Compression* Kind of fuel used *Heavy Oil*  
 k shaft, { Solid forged as per Rule *6.2"* Crank pin dia. *6.75"* Crank Webs Mid. length breadth *9"* Thickness parallel to axis  
 { Semi built as fitted *6.75"* Mid. length thickness *3.75"* Thickness around eyehole *✓*  
 { All built  
 heel Shaft, diameter as per Rule *Hyopel mounted on crankshaft* Intermediate Shafts, diameter as per Rule *3.9"* Thrust Shaft, diameter at collars as per Rule *4.1"*  
 as fitted *✓* fitted *4"* as fitted *4.75"*  
 Shaft, diameter as per Rule *✓* Screw Shaft, diameter as per Rule *4.42"* Is the *tab* shaft fitted with a continuous liner *No.*  
 as fitted *✓* as fitted *4.5"* as fitted *✓*  
 ze 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 *✓* liner boss *✓* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *✓*  
 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 *✓*  
 o 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  
*yes* If so, state type *Drawing No 3536 approved 27.10.41* Length of Bearing in Stern Bush next to and supporting propeller *17 1/4"*  
 elli, dia. *56"* Pitch *43"* No. of blades *4* Material *C. I.* whether Movable *No* Total Developed Surface *9* sq. feet  
 od of reversing Engines *Direct* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication  
 reed 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  
 nducting 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 *✓*  
 ng 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 *yes*  
 Pumps worked from the Main Engines, No. *One* Diameter *4.25"* Stroke *3"* Can one be overhauled while the other is at work *✓*  
 os connected to the Main Bilge Line { No. and Size *Two, One 4.25" x 3" stroke & One 2 1/2" Centrifugal Pump*  
 { How driven *Main Engine Auxiliary engine*  
 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  
 ements *✓* *2 Double acting, One on main engine & one driven by Auxiliary engine No 4114*  
 ist Pumps, No. and size *✓* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *1 3/4" bore x 3" stroke*  
 o independent means arranged for circulating water through the Oil Cooler *yes* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
 s, No. and size:—In Machinery Spaces *3 - 2 1/2"* In Pump Room *✓*  
 lds, &c. *3 - 2 1/2"*  
 pendent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *One 2 1/2"*  
 ll the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *yes* Are the Bilge Suctions in the Machinery Spaces  
 m easily accessible mud-boxes, placed above the level of the working floor, with straight air pipes to the bilges *yes*  
 l Sea Connections fitted direct on the skin of the ship *yes* Are they fitted with Valves or Cocks *yes*  
 ey fixed sufficiently high on the ship's side to be seen without lifting the platform plates *yes* Are the Overboard Discharges above or below the deep water line *Above*  
 ey 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 *✓*  
 pipes pass through the bunkers *✓* How are they protected *✓*  
 pipes pass through the deep tanks *3 hold suctions, 1 ballast tank, 1 oil well tank* Have they been tested as per Rule *yes*  
 l Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *yes*  
 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  
 tment to another *yes* Is the Shaft Tunnel watertight *✓* Is it fitted with a watertight door *✓* worked from *✓*  
 ood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *✓*  
 Air Compressors, No. *One* No. of stages *2* Diameters *6" x 2.75"* Stroke *3"* Driven by *Main Engine*  
 ary Air Compressors, No. *One* No. of stages *One* Diameters *4.5"* Stroke *2.75"* Driven by *Aux. Engine*  
 Auxiliary Air Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*  
 provision is made for first Charging the Air Receivers *Auxiliary air compressor driven by hand started auxiliary engine*  
 enging Air Pumps, No. *Underside of pistons* Diameter *3"* Stroke *2.21"* Driven by *✓*  
 as per Rule *3.25"* *2.25"* No. *2*  
 ary Engines crank shafts, diameter as fitted *3.25"* *2.25"* Position *One port side & One star. side engine room*  
 the Auxiliary Engines been constructed under special survey *yes* Is a report sent herewith *yes*



AIR RECEIVERS:—Have they been made under survey

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

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

Starting Air Receivers, No.

3

Total cubic capacity

18.4 cub. ft.

Internal diameter

2 @ 12.5"  
1 @ 9.875"

thickness

by Rules

Actual

Seamless, lap welded or riveted longitudinal joint

Seamless

Material S.M. Steel

Range of tensile strength

28-32 Tons

Working pressure

by Rules

Actual

25" x .3125"

350 lbs.

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

(If not, state date of approval)

13-11-40

Separate Fuel Tanks 4-10-41 & 23-10-41

Donkey Boilers

General Pumping Arrangements

27-1-42

Pumping Arrangements in Machinery Space

10-3-42

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

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

5-1-42, 4-2-42, 10-3-42, 1-4-42, 28-4-42, 6-5-42.

26-11-41, 8-12-41, 17-12-41, 19-2-42, 26-5-42, 29-6-42, 21-7-42, 30-7-42, 14-8-42, 19-8-42, 3-9-42, 7-9-42.

18

Dates of Examination of principal parts—Cylinders

5-1-42 x

4-2-42

Covers 4-2-42

Pistons 28-4-42

Rods

Connecting rods

5-1-42.

Crank shaft

5-1-42

Flywheel shaft

✓

Thrust shaft

15-10-41

Intermediate shafts

30-6-42

Tube shaft

✓

Screw shaft

20-11-41

Propeller

17-12-41

Stern tube

8-12-41

Engine seatings

17-12-41

Engines holding down bolts

21-7-42

Completion of fitting sea connections

19-2-42

Completion of pumping arrangements

7-9-42

Engines tried under working conditions

7-9-42.

Crank shaft, Material

S.M. Steel

Identification Mark

JWL 5-1-42

Flywheel shaft, Material

✓

Identification Mark

Lloyds No 234

Thrust shaft, Material

do.

Identification Mark

Lloyds No 297

Intermediate shafts, Material

S.M. Steel

Identification Marks

36-6-42 WJF

Tube shaft, Material

✓

Identification Mark

✓

Screw shaft, Material

S.M. Steel

Identification Mark

28-11-41 JWL

Identification Marks on Air Receivers

Staked to be Chesterfield Tube Co's Nos 54586 & 54589

Ruston & Hornsby's No D 799

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

Hose connection outside ER casing, Two 2 gal. Foamite extinguishers for oil fires, one in ER & one in after.

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

Is this machinery duplicate of a previous case

yes

If so, state name of vessel

Rowhedge Yard No M605. TRV2.

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

See Leeds Report No. 22.

These engines have been properly fitted on board the vessel and examined under working conditions with satisfactory results.

In my opinion the machinery is eligible for the notation of + LMC-9-42.

Certificate (if required) to be sent to the Committee's Minute.

The amount of Entry Fee .. £ 34 : 0 : 0  
Classification fee .. £ 34 : 0 : 0  
Supn of Specification .. £ 68 : 0 : 0  
Less Donkey Boiler Fee .. £ 35 : 0 : 0  
by Leeds Surveyor .. £ 33 : 0 : 0  
Travelling Expenses (if any) .. £ 4 : 6 : 6

When applied for, 16/9/1942.  
When received, 19

Committee's Minute

FRI 19 OCT 1942

Assigned

John B. 9-42  
OK Lf

Chadwick

Engineer Surveyor to Lloyd's Register of Shipping.



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