

REPORT ON OIL ENGINE MACHINERY.

No. 101186

Received at London Office

79 APR 1943

Date of writing Report

When handed in at Local Office

14/4/1943 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Date, First Survey

17 June 1942

Last Survey

8 April 1943

Number of Visits

67

Single
on the ~~Triple~~
Screw vessel"BRITISH RESPECT."Tons { Gross 8479
Net 4967

Built at Newcastle

By whom built Swan, Hunter & Wigham Richardson Ltd

Yard No. 1724 When built 1943-

Engines made at ditto

By whom made ditto

Engine No. 1726 When made "

Donkey Boilers made at ditto

By whom made ditto

Boiler No. 1724 When made "

Brake Horse Power 3,100

Owners British Tanker Co Ltd

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 Carrying Petroleum in bulk

OIL ENGINES, &c.—Type of Engines *Opposed piston, Airless injn* 2 or 4 stroke cycle *2*. Single or double acting *Single*

Maximum pressure in cylinders *568 lb* Diameter of cylinders *600 mm* Length of stroke *2320* No. of cylinders *4* No. of cranks *4 three*

Mean Indicated Pressure *85 lb* *centring side rods 1200 mm* *comb. thrust down 91 1/2*

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *940 mm* Is there a bearing between each crank *between each 3 throw*

Revolutions per minute *105* Flywheel dia. *425* Weight *425* Means of ignition *compression* Kind of fuel used *heavy oil*

Crank Shaft, { *Solid forged* as per Rule *425* Crank pin dia. *450* Crank Webs Mid. length breadth *650* Thickness parallel to axis *255*
Semi built dia. of journals as fitted *450* (Centre Co. pin *432*) as per Rule *138* Mid. length thickness *255* shrunk Thickness around eyehole *200*
All built as per Rule *425* as fitted *450* Thrust Shaft, diameter at collars as per Rule *425* as fitted *450*

Flywheel Shaft, diameter as per Rule *425* as fitted *450* Intermediate Shafts, diameter as per Rule *14 6/8* as fitted *16 7/8*

Tube Shaft, diameter as per Rule *None* as fitted *23 7/8* Screw Shaft, diameter as per Rule *23 7/8* as fitted *16 7/8* Is the { *tube* } shaft fitted with a continuous liner { *Yes*
screw }

Bronze Liners, thickness in way of bushes as per Rule *23 7/8* as fitted *2 3/2* Thickness between bushes as per Rule *9/16* as fitted *25/32* Is the after end of the liner made watertight in the 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 *In one length.*

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 *a tight fit*

If two liners are fitted, is the shaft lapped or protected between the liners. *Yes* Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft *No* If so, state type *Yes* Length of Bearing in Stern Bush next to and supporting propeller *5' 8 1/2*

Propeller, dia. *16' 3"* Pitch *12' 3"* No. of blades *4* Material *M. B. R.* whether Moveable *No* Total Developed Surface *90* sq. feet

Method of reversing Engines *Compressed air* Is a governor or other arrangement fitted to prevent racing of the engine *when decelerated* *Yes* Means of lubrication *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 non-conducting material *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 in S.W. System*

Cooling Water Pumps, No. *2 for Distilled Water (for jackets)* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*

Bilge Pumps worked from the Main Engines, No. *None* Diameter *✓* Stroke *✓* Can one be overhauled while the other is at work *✓*

Pumps connected to the Main Bilge Line { No. and Size *Three, viz, 1 Ballast P. 10 x 11 x 10 duplex, 1 Bilge & 1 Sanitary, each 7 x 7 1/2 x 8 duplex*
How driven *Independent Steam driven* each 80 tons/hr

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 arrangements *✓*

Ballast Pumps, No. and size *One 10 x 11 x 10 duplex* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *One 8 x 7 x 18 simplex*

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 dia.; 2 of 2 1/2 dia. to OF Gutterways* In Pump Room *2 of 4 dia*

In Holds, &c. *2 of 2 1/2 in Fore hold; 2 of 2 dia in Store room; 1 of 2 dia in Ford Hold Pump Room* Main *For 1 of 4*

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1 of 6 to Ballast Pump* Cofferdams *off 1-3" sector*

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *Yes* 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 *Yes*

Are all Sea Connections fitted direct on the skin of the ship *Yes* Are they fitted with Valves or Cocks *both*

Are they 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 *Below.*

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*

What pipes pass through the bunkers *None* How are they protected *✓*

What pipes pass through the deep tanks *None* 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 *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 (mach. aft)* 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. *None (Airless Injection)* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*

Auxiliary Air Compressors, No. *2* No. of stages *3* Diameters *11 3/4* Stroke *7"* Driven by *Steam Eng.*

Small Auxiliary Air Compressors, No. *None* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*

What provision is made for first Charging the Air Receivers *by Steam driven Compressors.*

Scavenging Air Pumps, No. *One Double Acting* Diameter *1960 mm* Stroke *608 mm* Driven by *Lever from main engine*

Auxiliary Engines crank shafts, diameter as per Rule *✓* No. *2 Steam driven 30KW Sets* Position *ALL ON STEER Side in main Eng. Room.*

Have the Auxiliary Engines been constructed under special survey *No (Steam only)* Is a report sent herewith *✓*

00222-002228-0196

AIR RECEIVERS:—Have they been made under survey *Yes* State No. of Report or Certificate *✓*
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. *None* Cubic capacity of each *✓* Internal diameter *✓* thickness *✓*
Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *by Rules*
Starting Air Receivers, No. *2* Total cubic capacity *280 cub. ft.* Internal diameter *4 1/2"* thickness *1 3/32"*
Seamless, lap welded or riveted longitudinal joint *TR. 8 1/2" butt shape* Material *Steel* Range of tensile strength *29833 lbs* Working pressure *by Rules 602 lbs*
Actual *600 lbs*

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 — also for Steam Amps etc*
PLANS. Are approved plans forwarded herewith for Shafting *TS & 2nd Sh. 30/5/41* Receivers *28/5/42* Separate Fuel Tanks *✓*
(If not, state date of approval.)
Donkey Boilers *28/5/42* General Pumping Arrangements *at Ford Rd 20/1/42* Pumping Arrangements in Machinery Space *22/10/42*
Oil Fuel Burning Arrangements *22/10/42*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*
State the principal additional spare gear supplied *1 main bearing (spherical), 1. non-ret. Air Starting Valve, 1 Cyl. relief valve*
1 Fuel pump body complete with inlet & delivery valves, 2 Skirts for Pistons (1 upper & 1 lower), 5 main piston rings,
4 scraper rings for Piston Skirt, 6 Rubber hoses for upper Piston water service, 1-6 feed Mech. Lubricator
for working Cyls, 2 complete sets of stuffings & joints, 12 boiler tubes, 1 Safety Valve Spring, 1 bed for feed check valve,
1 dog Gauge glasses & packing rings, 2 sets of piston rings for HP piston of Amps Compr., half set of valves
& springs for Amps Compr., 2 burner caps, 12 nozzles & 12 diaphragms for O.F. burning smother, etc etc.

The foregoing is a correct description, *FOR LLOYD'S REGISTER, LTD.*

G. J. Sweeney

Manufacturer.

Dates of Survey while building
During progress of work in shops -- *1942*
June 7. 22. July 24. 27. Aug. 6. 7. 21. 26. Sep. 1. 7. 11. 15. 16. 24. Oct. 6. 7. 9. 14. 16. 20. 21. 23. 28. 29. Nov. 2. 3. 4. 5.
During erection on board vessel -- *6. 9. 11. 12. 13. 24. 25. 30. Dec. 2. 4. 7. 9. 14. 15. 16. 17. 21. 23. 29. 1943*
Jan. 7. 11. 15. 19. 21. Feb. 6. 16. 22. Mar. 2.
Total No. of visits *67.*

Dates of Examination of principal parts—Cylinders *26/8/42* Covers *✓* Pistons *23rd & 28th 10/43* Rods *as Piston* Connecting rods *13/11/43.*
Crank shaft *29-10-42* Flywheel shaft *29-10-42* Thrust shaft *29-10-42* Intermediate shafts *21-12-42* Tube shaft *none*
Screw shaft *4-12-42* Propeller *4/12/42* Stern tube *17/12/42* Engine seatings *17/12/42* Engines holding down bolts *12/3/43*
Completion of fitting sea connections *15/1/43* Completion of pumping arrangements *2/4/43* Engines tried under working conditions *31/3/43 & 8/4/43.*
Crank shaft, Material *Steel* Identification Mark *110028 L.C.D. 9-10-42* Flywheel shaft, Material *Steel* Identification Mark *as Crank Shaft*
Thrust shaft, Material *Steel* Identification Mark *as Crank Sh.* Intermediate shafts, Material *Steel* Identification Marks *11530 HAI 534*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *11530 HAI 538.*

Identification Marks on Air Receivers

Two Starting Air Receivers

*LLOYD'S TEST 800 LBS
WP 600 LBS
30-11-42 AWARD*

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 *not desired.*
Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *British Character New Apt 100,073.*
(SHMR 42nd h 1698).

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

The Machinery of this Vessel has been constructed under Special Survey in accordance with the approved plans and the Society's Rules, and the materials and workmanship are good. The Main Engine was tested under full load in the works and afterwards the Elec. welded Construction Bedplate, Columns & Lintabature were examined and found in good condition. The Machinery has been efficiently installed on board the vessel, tested under working conditions (at Wharf), with satisfactory results, and is eligible, in my opinion, for record + LMC 4.43, and the notations "2 DB. WP 150 lb.
CL. Oil Eng. Machy aft."

The amount of Entry Fee .. £ *6 : 0 :* When applied for, *28 APR 1943*
Special *109 : 7 :*
E.W. Constn .. £ *12 : 12 :*
Donkey Boilers Fee .. £ *23 : 10 :* When received, *19*
2 Starting Air Receivers .. £ *4 : 4 :*
Travelling Expenses (if any) .. £ *4 : 4 :*

Committee's Minute

Assigned

+ LMC 4.43 CL

2 DB 150 lb

A. Watt

Engineer Surveyor to Lloyd's Register of Shipping.



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