

REPORT ON OIL ENGINE MACHINERY.

No. 101186

Received at London Office 79 APR 1943

Date of writing Report 19 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.

on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel "BRITISH RESPECT."
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.

Tons { Gross 8479
Net 4967

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 mm No. of cylinders 4 No. of cranks 4 three
Mean Indicated Pressure 85 lb centring side rods 1200 mm Is there a bearing between each crank between each
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 940 mm 3 throes
Revolutions per minute 105 Flywheel dia. 425 mm Weight 425 lb 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 Crank pin approved. 432.) as per Rule 138 Mid. length thickness 255. shrunk Thickness around eye-hole 200.
All built as fitted 425. Intermediate Shafts, diameter as fitted 16 7/8 Thrust Shaft, diameter at collars as per Rule 425.
as fitted 450. as fitted 450.

Tube Shaft, diameter as per Rule none. Screw Shaft, diameter as per Rule 14.68 Is the shaft fitted with a continuous liner { Yes
as fitted 16 7/8 as fitted 16 7/8 Is the screw shaft fitted with a continuous liner { Yes
Bronze Liners, thickness in way of bushes as per Rule 23.93 Thickness between bushes as per Rule 9/16 Is the after end of the liner made watertight in the
as fitted 27/32 as fitted 25/32 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. Is an approved Oil Gland or other appliance fitted at the after end of the tube
shaft No If so, state type 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 Manganese 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 disconnected 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
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 In S.W. System
Bilge Pumps worked from the Main Engines, No. None Diameter Stroke Can one be overhauled while the other is at work Yes
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 OFC Gutters 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 Ford 1 of 4"
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 6" to Ballast Pump, Cofferdams aft 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 (machinery 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 30 kW Sets main engine
as fitted Position + 2 Steam driven Air Compressor Sets 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

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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 *T.R. 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 *Tst Inter 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 End 20/1/42* Pumping Arrangements in Machinery Space *22/10/42*
 Oil Fuel Burning Arrangements *22/10/42.* *Surveyor's copy all retained for 1726 ship 20*

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 Rutter hoses for upper Piston water service, 1-6 feed Mech. Lubricator
for working Cyls, 2 complete sets of springs & 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* *WARDSON, LTD.*

G.F. 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* 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 AWQW

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 4 and 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 & Lubricator 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.
Ch. Oil Eng. Machy aft."

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

A Watt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUES. 11 MAY 1943*
 Assigned *+ LMC 4.43 CL*
2 DB 150 lb



NEWCASTLE-ON-TYNE

Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)