

REPORT ON OIL ENGINE MACHINERY

No 19261

18 JUL 1951

Received at London Office

19 When handed in at Local Office 17.7.51 Port of WEST HARTLEPOOL

in Survey held at WALLSEND-ON-TYNE Date, First Survey Last Survey 19

on the *Single* *Triple* *Quadruple* Screw vessel M.V. BRITISH BIRCH Number of Visits 8

built at SUNDERLAND By whom built SIR JAMES LANE & SONS LTD. Yard No. 791 When built 1951

engines made at HARTLEPOOL By whom made RICHARDSONS WESTGARTH & CO. LTD. Engine No. 3189 When made 1951

Boilers made at WALLSEND-ON-TYNE By whom made N.E.M. ENG. CO (1938) LTD. Boiler No. 3189 When made 1951

Horse Power 3100 Owners BRITISH TANKER CO. LTD. Port belonging to LONDON

Horse Power as per Rule 688 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted YES

ide for which vessel is intended OPEN SERVICE

ENGINES, &c.—Type of Engines FOR PARTICULARS or 4 stroke cycle. Single or double acting

um pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Indicated Pressure OF ENGINE

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

tions per minute SEE HARTLEPOOL REPORT No. 19205 Means of ignition Kind of fuel used

ff. { Solid forged as per Rule Crank pin dia. Crank Webs Mid. length breadth Thickness parallel to axis
Semi built dia. of journals as fitted as per Rule 12.83" Mid. length thickness shrunk Thickness around eyehole
All built as fitted as per Rule 17 3/4" Thrust Shaft, diameter at collars as per Rule 342 1/4"
as fitted as fitted as fitted 450 1/4"

heel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 14.18" Is the { tube } shaft fitted with a continuous liner {
as fitted as fitted as fitted 17 3/4" screw } yes ✓

Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 23.43" Is the { tube } shaft fitted with a continuous liner {
as fitted as fitted as fitted 3 3/4" screw } yes ✓

te Liners, thickness in way of bushes as per Rule 3 3/4" Thickness between bushes as per Rule 3 3/4" Is the after end of the liner made watertight in the

er boss yes 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

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

No. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5'-6 1/4" ✓

iller, dia. 16'-3" Pitch 11'-9" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 93 sq. feet

od of reversing Engines + compressed air Is a governor or other arrangement fitted to prevent racing of the engine when detached yes Means of lubrication

ed Thickness of cylinder liners 25 1/4" Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

ducting 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

ng Water Pumps, No. 1-DA. jockey + filter + cooler big (distilled water) 220 1/2" bore x 510 1/2" stroke 91 1/2" Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

s connected to the Main Bilge Line { No. and Size 1- Ballast 10'x12'x10' 200 tons/hr. 1- Bilge 7'x8'x8' 100 tons/hr. 1- Scum tank 7'x8'x8' 100 tons/hr.
How driven Steam } ✓

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

st Pumps, No. and size 1- 10'x12'x10' 200 tons/hr. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1- 7'x8'x18' 33 tons/hr.

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 1- 3 1/2" P. Ford. 1- 3 1/2" S. Ford. 1- 3 1/2" V. aft. MAIN In Pump Room 2- 4" (Independent pumps)

ds, &c. FORD. HOLD. 1- 2" P. 1- 2" S. FORD. PUMP ROOM 1- 2"

endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1- 6" Starbel: ✓ 1- 6" aft.

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

on easily accessible mud-bases placed above the level of the working floor, with straight tail pipes to the bilges yes ✓

Sea Connections fitted direct on the skin of the ship yes (with welded) Are they fitted with Valves or Cocks both ✓

ay 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 ✓

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 yes ✓

pipes pass through the bunkers How are they protected

pipes pass through the deep tanks Have they been tested as per Rule

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

ment to another 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. None No. of stages Diameters Stroke Driven by

lary Air Compressors, No. 2 No. of stages 3 Diameters each 125 cu. ft. per min. Stroke Driven by steam engine

all Auxiliary Air Compressors, No. — No. of stages Diameters Stroke Driven by

at provision is made for first Charging the Air Receivers Auxiliary Air compressors.

avenging Air Pumps, No. 2 Diameter 1510 1/4" Stroke 510 1/4" Driven by M. Eng. Levers.

2.6. Auxiliary Engines crank shafts, diameter as per Rule 2-75 KW. Diesel Approved. No. 2-75 KW. Diesel 1-30 KW. steam
as fitted see Glasgow Rpt. No. 76716 Position 1-75 KW. Port fwd. Starbel side
1-75 KW. Starbel fwd. Diesel — yes

ve the Auxiliary Engines been constructed under special survey Diesel — yes: Steam — No. Is a report sent herewith

AIR RECEIVERS: — Have they been made under survey *yes* State No. of Report or Certificate *C. 35137*
Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes* fitted with fusible plugs *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 *—*
Starting Air Receivers, No. *2* Total cubic capacity *each 140 cu. ft.* Internal diameter *4'-1 1/2"* thickness *1 3/32"*
Seamless, lap welded or riveted longitudinal joint *riveted* Material *m. steel* Range of tensile strength *shell 28/32 tons/in.²* Working pressure *600*

IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes*
Is the donkey boiler intended to be used for domestic purposes only? *no*
PLANS. Are approved plans forwarded herewith for Shafting *22-2-50* Receivers *4-10-50* Separate Fuel Tanks *8-7-50*
Donkey Boilers *9-8-49* General Pumping Arrangements *28-12-50* Pumping Arrangements in Machinery Space *28-12-50*
Oil Fuel Burning Arrangements *28-12-50*
SPARE GEAR. *88J*
Has the spare gear required by the Rules been supplied *yes*
State the principal additional spare gear supplied *see attached lists*

T.V.C. appd 22/1/50 for 1054
provided journals be set so that
speed cannot exceed 115 rpm.

The foregoing is a true and correct copy of the original as submitted to me by the Engineer Surveyor.
Wm. Hunter
And the particulars of the installation as far as approved for torsional vibration character.
Manufacturer.

Dates of Survey while building	During progress of work in shops--	During erection on board vessel--	Total No. of visits	Newcastle.		Middlesbrough.	
				(1950)	(1951)	(1949)	(1950)
				June 7, 26, Oct. 11, 19, 20, 25, 30, Nov. 1, 3, 9, 10, 14, 15, 22, 27, 29, Dec. 1, 4, 5, 6, 11, 13, 15, 18, 21, 27.	Jan. 4, 5, 8, 10, 15, 16, 17, 24, 25, 26, 30, Feb. 2, 9, 12, 13, 16, 26, Mar. 2 (No. of visits 44).	Oct. 28, 21, Nov. 3, 9, Mar. 16, 17, 20, 21, 2, Apr. 13, 18, 20, 21, 24, 25, 26, 5, 11, June 2, 6, 8, 9, 12, 13, 23, 27, 29, July 4, 6, 12, 13, 28, Dec. 21, 28, (1951) May	
Dates of Examination of principal parts—Cylinders				28, Aug. 17, 22, 23, 24, 31, Nov. 8, 16, 22, 28, Dec. 21, 28.			
Crank shaft				Flywheel shaft	Thrust shaft	Intermediate shafts	Tube shaft
Screw shaft				Propeller	Stern tube	Engine seatings	Engines holding down bolts
Completion of fitting sea connections.				Completion of pumping arrangements	Engines tried under working conditions		
Crank shaft, Material				Identification Mark	Flywheel shaft, Material	Identification Mark	
Thrust shaft, Material				Identification Mark	Intermediate shafts, Material	Identification Marks	
Tube shaft, Material				Identification Mark	Screw shaft, Material	Identification Mark	
Identification Marks on Air Receivers.				No. 1 & 2. LLOYDS TEST. 800 lb/p.²	W.P. 600 lb/p.²		

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 *see attached list. (Approved 23-1-51)*
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 *No* If so, state name of vessel *—*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been installed in accordance with the Approved Plans, Secretary's letters and the Rule Requirements. The materials and workmanship are good. The machinery is tried under normal working conditions both alongside and at sea with satisfactory results. The two Donkey Boilers have been securely fitted to burn oil fuel (F.P. above 150°F) and the Safety adjusted under steam to working pressure. Main engine governor to prevent engine speed rising above 115 revs. per minute and tachometer marked accordingly.*

The machinery of this vessel is in our opinion eligible to have notations, + L.M.C. (oil eng) 6-51. T.S. (CL). 2 D.B. 150 lb/p.².

The amount of Entry Fee .. £ *See Appendix* When applied for, *19*
Special ... £ *See Appendix* When received, *19*
Donkey Boiler Fee ... *See Appendix*
Travelling Expenses (if any) £ *See Appendix*
Committee's Minute *FRI. 27 JUL 1951*
Assigned *+ LMC 6.51 Oil Eng*
C.L. 2 D.B. 150 lb (with motorsement)
W. Houghton & J. A. O'Neil
Engineer Surveyor to Lloyd's Register of Shipping
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