

Received at London Office MAY 17 1939

ate of writing Report

19. When handed in at Local Office

15: 5: 1939 Port of

Glasgow

MAY 17 1939

No. in Survey held at  
Reg. Book.

Single }  
on the ~~Two~~ } Screw vessel  
~~Triple~~ }  
~~Quadruple~~ }

Stock Engine No. 317. fitted in  
M.S. Empire boat

Tons } Gro  
Net

uilt at	✓	By whom built	✓	Yard No.	✓	When built	✓
Engines made at	Glasgow.	By whom made	British Auxiliaries Ltd	Engine No.	317	When made	1939
Smoke Boilers made at	✓	By whom made	✓	Boiler No.	✓	When made	✓
Gross Horse Power	910	Owners	✓	Port belonging to	✓		
Net Horse Power as per Rule	156	Is Refrigerating Machinery fitted for cargo purposes	✓	Is Electric Light fitted	✓		
Use for which vessel is intended	✓						

**ENGINES, &c.**—Type of Engines *Heavy Oil. M. 45M. Type* 2 or 4 stroke cycle *2* Single or double acting *Single*  
 Maximum pressure in cylinders *782 lbs.*  
 Indicated Pressure *96* " Diameter of cylinders *340 7/8* Length of stroke *570 7/8* No. of cylinders *5* No. of cranks *5*  
 Bearings, adjacent to the Crank, measured from inner edge to inner edge *484 7/8* Is there a bearing between each crank *Yes*  
 Rotations per minute *300* Flywheel dia. *1320 7/8* Weight *2250 Kgs* Means of ignition *Compression* Kind of fuel used *Diesel*  
 Crankshaft, { Solid forged *as per Rule* *216 7/8* dia. of journals *as fitted* *220* Crank pin dia. *220 7/8* Crank Webs Mid. length breadth *308.3 7/8* Thickness parallel to axis *✓*  
 { ~~Semi forged~~ *as fitted* *220* Mid. length thickness *122 7/8* Thickness around eyehole *✓*  
 Wheel Shaft, diameter *as per Rule* *216 7/8* Intermediate Shafts, diameter *as per Rule* *147 7/8* Thrust Shaft, diameter at collars *as per Rule* *154 7/8*  
 as fitted *260* as fitted *✓* as fitted *260 7/8*  
 Crank Shaft, diameter *as per Rule* *✓* Screw Shaft, diameter *as per Rule* *✓* Is the { tube { shaft fitted with a continuous liner { *✓*  
 as fitted *✓* as fitted *✓* screw } *✓*  
 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 *✓*  
 Lower 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 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 ✓  
 ✓ If no 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 ✓  
 ✓ If so, state type ✓ Length of Bearing in **Stern Bush** next to and supporting propeller ✓

1. **eller, dia.** ✓ *Pitch* ✓ *No. of blades* ✓ *Material* ✓ *whether Moveable* ✓ *Total Developed Surface* ✓ *sq. feet*  
 2. **od of reversing Engines** *Direct* ✓ *Is a governor or other arrangement fitted to prevent racing of the engine when declatched* *Yes* *Means of lubrication*  
 3. **reed** *Thickness of cylinder liners* *25.5%* *Are the cylinders fitted with safety valves* *Yes* *Are the exhaust pipes and silencers ~~water cooled~~ or lagged with*  
 4. *ducting 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* ✓

ing Water Pumps, No. 1 off 133 7/8 x 140 7/8 Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓  
Pumps worked from the Main Engines, No. One Diameter 100 7/8 Stroke 140 7/8 Can one be overhauled while the other is at work ✓

s connected to the Main Bilge Line { No. and Size ..... ✓  
How driven ..... ✓

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  
ments.....✓

**Oil Pumps, No. and size** ✓ **Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size** 1 of 77 gallons per 1

independent means arranged for circulating water through the **Oil Cooler** ..... **Suctions**, connected to both Main Bilge Pumps and Auxiliary Bilge  
No. and size:—In Machinery Spaces ..... In Pump Room

Is, etc. ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ✓

the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ..... ✓ ..... Are the Bilge Suctions in the Machinery Spaces  
easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges ..... ✓

**Sea Connections** fitted direct on the skin of the ship..... Are they fitted with Valves or Cocks. ✓

*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* ✓

*each fitted with a Discharge Valve always accessible on the plating of the vessel* ✓ *Are the Blow Off Cocks fitted with a swing and brass covering plate* ✓

How are they protected

7 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ✓

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. One No. of stages 2 Diameters 17 5/8"-70" Stroke 350" Driven by Main Engines

Large Air Compressors, No.	No. of stages	Diameters	Stroke	Driven by
1	1	36	48	Steam
2	1	36	48	Steam
3	1	36	48	Steam
4	1	36	48	Steam
5	1	36	48	Steam
6	1	36	48	Steam
7	1	36	48	Steam
8	1	36	48	Steam
9	1	36	48	Steam
10	1	36	48	Steam
11	1	36	48	Steam
12	1	36	48	Steam
13	1	36	48	Steam
14	1	36	48	Steam
15	1	36	48	Steam
16	1	36	48	Steam
17	1	36	48	Steam
18	1	36	48	Steam
19	1	36	48	Steam
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39	1	36	48	Steam
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41	1	36	48	Steam
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44	1	36	48	Steam
45	1	36	48	Steam
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81	1	36	48	Steam
82	1	36	48	Steam
83	1	36	48	Steam
84	1	36	48	Steam
85	1	36	48	Steam
86	1	36	48	Steam
87	1	36	48	Steam
88	1	36	48	Steam
89	1	36	48	Steam
90	1	36	48	

Provision is made for first Charging the Air Receivers	No. of stages	Diameters	Stroke	Driven by
✓	3	350 mm	350 mm	7-22

enging Air Pumps, No.	one.	Diameter	Stroke	Driven by
		8 3/4	17	run

lary Engines crank shafts, diameter	as per Rule	No.	Position

*the Auxiliary Engines been constructed under special survey* *Is a report sent herewith*



**AIR RECEIVERS:**—Have they been made under survey None Supplied State No. of Report or Certificate ✓  
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 ✓ Is a drain fitted at the lowest part of each receiver ✓  
**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 ✓ Actual ✓  
**Starting Air Receivers, No.** none Supplied Total cubic capacity ✓ Internal diameter ✓ thickness ✓  
Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓ Actual ✓

**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 7/4/33, 22/5/33 Receivers ✓ Separate Fuel Tanks ✓  
(If not, state date of approval)  
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 as attached list

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops-- } 1938 May: 20 Nov: 15 Dec: 7-12-14 (1939) Feb: 3-15-17-21-22 May: 1-2-9  
{ During erection on board vessel--- }  
Total No. of visits 13  
Dates of Examination of principal parts—Cylinders 12-12-38 14-12-38 Covers 12-12-38 14-12-38 Pistons 12-12-38 Rods 15-11-38 Connecting rods 15-11-38  
Crank shaft 15-11-38 Flywheel shaft 15-11-38 Thrust shaft 15-11-38 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 steel Identification Mark and Flywheel shaft, Material steel Identification Mark Lloyds 9710 30  
Thrust shaft, Material steel Identification Mark 44048 No. 9716.P.K. 21-537 Intermediate shafts, Material ✓ Identification Marks ✓  
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material ✓ Identification Mark ✓  
Identification Marks on Air Receivers none supplied

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 ✓

Is this machinery duplicate of a previous case yes If so, state name of vessel M/V Dofala. Gls report No 58

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines have been built in accordance with the Rules and approved plans. The material and workmanship are good. They have been tried on the bench at full power with satisfactory results. They have been built for stock.

This engine has been sold to Messrs Henry Robb. Leith and intended for their stock

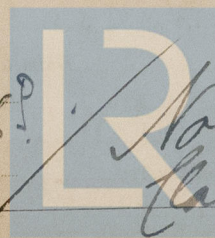
Robb  
15/5/39

The amount of Entry Fee £ 3 0 0  
Special £ 26 0 0  
Donkey Boiler Fee £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 16 MAY 1939  
When received, 30 6 1939 7/7

Committee's Minute GLASGOW 16 MAY 1939

Assigned Referred

G. B. Murdoch.  
Engineer Surveyor to Lloyd's Register of Shipping



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Lloyd's Register of Shipping