

Rpt. 4.

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 95095

Date of writing Report 19 When handed in at Local Office 31/5/37 Port of **NEWCASTLE-ON-TYNE**
 No. in Survey held at **South Shields** Date, First Survey 11 May 36 Last Survey 17 May 19 37
 Reg. Book. 87515 on the **S.S. BALTISTAN** (Number of Visits 99)
 Built at **S. Shields** By whom built **J. Readhead & Sons Ltd** Yard No. 508 Tons Gross 6803.46 Net 4194.01
 Engines made at **South Shields** By whom made **J. Readhead & Sons Ltd** Engine No. 508 When built 1937
 Boilers made at **South Shields** By whom made **J. Readhead & Sons Ltd** Boiler No. 508 When made 1937
 Registered Horse Power Owners **Shank Line (1923) Ltd** Port belonging to **London**
 Nom. Horse Power as per Rule 914 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended **General cargo**

ENGINES, &c.—Description of Engines **Triple Expansion S.P. Turbine with D.R.**
 Dia. of Cylinders **29 x 49 x 81** Length of Stroke **51** No. of Cylinders **3** Revs. per minute **87.5**
 Crank shaft, dia. of journals as per Rule **15.92** Crank pin dia. **16** Crank webs Mid. length breadth **1-11/2** Thickness parallel to axis **10 1/8**
 as fitted **16** Mid. length thickness **10 1/8** Thickness around eye-hole **7**
 Intermediate Shafts, diameter as per Rule **15.35** Thrust shaft, diameter at collars as per Rule **16.14**
 as fitted **15 3/8** as fitted **16.37 - 4 1/2 in**
 Tube Shafts, diameter as per Rule **16.95** Is the **tube** shaft fitted with a continuous liner **Yes**
 as fitted **17 1/8** as fitted **17 1/8**
 Screw Shaft, diameter as per Rule **16.95** as fitted **17 1/8**
 Bronze Liners, thickness in way of bushes as per Rule **0.224** Thickness between bushes as per Rule **0.224**
 as fitted **0.224** as fitted **0.224** 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 **Yes**
 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 **Yes**
 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 **Yes** If so, state type **Yes** Length of Bearing in Stern Bush next to and supporting propeller **5-8 1/2**
 Propeller, dia. **19-0** Pitch **14 1/2** No. of Blades **4** Material **Brass** whether Moveable **No** Total Developed Surface **124.5** sq. feet
 Feed Pumps worked from the Main Engines, No. **2** Diameter **5** Stroke **27** Can one be overhauled while the other is at work **Yes**
 Bilge Pumps worked from the Main Engines, No. **2** Diameter **5** Stroke **27** Can one be overhauled while the other is at work **Yes**
 Feed Pumps { No. and size **Two - 9 x 12 x 24 One - 7 x 9 x 21** Pumps connected to the Main Bilge Line { No. and size **One - 10 x 11 1/2 x 10 7/8** Inlet **Yes**
 How driven **Steam** How driven **Steam**
 Ballast Pumps, No. and size **One - 10 x 11 1/2 x 10 7/8** Lubricating Oil Pumps, including Spare Pump, No. and size **Two - 8 x 9 x 18**
 Are two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room **3-3 dia**
 In Pump Room **1/2 hold 2-3 dia. Fresh tank 2-2 1/2 dia. Aft well 1-2 1/2 dia. Tunnel bilge 1-2 dia. Turbine room 1-2 dia. Turbine shafts 2-2 1/2 dia.**
 Main Water Circulating Pump Direct Bilge Suctions, No. and size **One - 12 dia** Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size **One 5 dia** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **Yes**
 Are the Bilge Suctions in the Machinery Space 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 **Ball**
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold 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**
 That Pipes pass through the bunkers **Bilge** How are they protected **Wood casings**
 That pipes pass through the deep tanks **Bilge** Have they been tested as per Rule **Yes**
 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 **Yes** Is it fitted with a watertight door **Yes** worked from **Upper deck**

MAIN BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **11480 sq**
 Is Forced Draft fitted **Yes** No. and Description of Boilers **3 Main 1 chyl. S.E.M.** Working Pressure **220 lbs**
IS A REPORT ON MAIN BOILERS NOW FORWARDED? **Yes**
IS A DONKEY BOILER FITTED? **No** If so, is a report now forwarded? **Yes**
 Is the donkey boiler intended to be used for domestic purposes only **Yes**
PLANS. Are approved plans forwarded herewith for Shafting **11-12-35** Main Boilers **31-1-36** Auxiliary Boilers **26-11-35** Donkey Boilers **Yes**
 (If not state date of approval)
 Superheaters **Yes** General Pumping Arrangements **25-7-36** Oil fuel Burning Piping Arrangements **25-7-36**

SPARE GEAR.

Has the spare gear required by the Rules been supplied **Yes**
 State the principal additional spare gear supplied
**Propeller & c. Screw shaft. 1 Excavator strap. Air pump bucket & rod. 1 Steam. 1 Exhaust
 poppet valve. Valve extension spindle for each. Set of springs complete for poppet valves.
 Top bottom half main bearings. 1 Bottom end complete. 1 Pair top end braces. 1 Valve spindle.
 2 Safety valve springs. 1 Turbine shaft for air pump. 1 Set of valves, bucket & rod for
 each air pump. 1 Set check valves. 50 bondings tubes & 200 ferrules. 24 Boiler tubes.
 1 Set of pads for thrust block.**

FOR JOHN READHEAD & SONS, LTD.

The foregoing is a correct description,

Manufactured by

CHAIRMAN & MANAGING DIRECTOR

W997-0026

1936
May 11. 14. 19. 21. 25. 28 June 9. 12. 15. 29 July 8. 13. 16. 27. 29 Aug. 10. 12. 14. 19. 20. 24. 26. 27.
During progress of work in shops - - Sep. 1. 7. 10. 11. 15. 16. 18. 22. 24. 28. 29. 30. Oct. 1. 2. 5. 6. 13. 16. 19. 20. 21. 23. 26. 30. Nov. 2. 4. 9. 10. 11. 12. 13
18. 27. 28. Dec. 8. 10. 15. 29 1937 Jan. 2. 11. 14. 18. 19. 29. Feb. 1. 12. 15. 17. 22. 24. 26. Mar. 1. 2. 3. 4. 8. 10. 15. 16. 1
During erection on board vessel - - 23. 24 Apr. 2. 5. 6. 15. 21. 27. May 3. 4. 6. 7. 11. 14. 15. 17.
Total No. of visits 99.

Dates of Examination of principal parts—Cylinders 2-3-37 Slides 2-3-37 Covers 2-3-37
Pistons 2-3-37 Piston Rods 1-3-37 Connecting rods 1-3-37
Crank shaft 27-2-37 Thrust shaft 27-2-37 Intermediate shafts 26-4-37
Tube shaft ✓ Screw shaft 26-4-37 Propeller 6-4-37
Stern tube 12-2-37 Engine and boiler seatings 16-3-37 Engines holding down bolts 19-4-37

Completion of fitting sea connections 22-2-37

Completion of pumping arrangements 7-5-37 Boilers fixed 19-4-37 Engines tried under steam 21-4-37

Main boiler safety valves adjusted 21-4-37 Thickness of adjusting washers P-5/16" C-1/4" S-3/8" A-1/4"
P-3/8" C-3/8" S-5/16" A-1/4"

Crank shaft material S.M. Steel Identification Mark 2427 Thrust shaft material S.M. Steel Identification Mark 3260-3263

Intermediate shafts, material S.M. Steel Identification Marks 3261-3264 Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material S.M. Steel Identification Mark 3256 Steam Pipes, material S.S. Steel Test pressure 660 lbs Date of Test 21-4-37

Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of the Rules for the use of oil as fuel 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 S.S. ARMANISTAN

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 rule requirements & approved plans.

The materials & workmanship are good. The machinery was satisfactorily tested on mooring & sea trials & in my opinion is eligible for classification with records + L.M.C. 5, 37. F.D.C.L.

Fitted for oil fuel 5, 37. F.P. above 150°F. 4 S.B. (SFC).

The amount of Entry Fee ... £ 6 : 0 :
Special ... £ 113 : 10 :
Donkey Boiler Fee ... £ ✓ : ✓ :
Travelling Expenses (if any) £ ✓ : ✓ :
When applied for, 31 MAY 1937
When received, 3.6 1937 4/6

Committee's Minute FRI 4 JUN 1937

Assigned + L.M.C. 5.37 (SFC)
Fitted for oil fuel 5.37 F.P. above 150°F
20, C.L.

J. H. Matthews
Engineer Surveyor to Lloyd's Register of Shipping.