

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 Received at London Office JUN -1 1937

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 Strick 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. Gear & Hydraulic Coupling

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

Intermediate Shafts, diameter as per Rule 15.35 as fitted 15 3/8 Thrust shaft, diameter at collars as per Rule 16.14 as fitted 16.37 - 4 1/4

Tube Shafts, diameter as per Rule as fitted ✓ Screw Shaft, diameter as per Rule 16.95 as fitted 17 1/8 Is the { tube } shaft fitted with a continuous liner { Yes }

Bronze Liners, thickness in way of bushes as per Rule .824 as fitted .875 Thickness between bushes as per Rule as fitted ✓ 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 ✓

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 ✓

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 ✓

Propeller, dia. 19-0 Pitch 14 1/8 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 - 9x12x24 One - 7x9x21 Pumps connected to the Main Bilge Line { No. and size one - 10x11 1/2 x 10 7/8 How driven Steam

Ballast Pumps, No. and size one 10x11 1/2 x 10 7/8 Lubricating Oil Pumps, including Spare Pump, No. and size Two - 9x9x18

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 1/6 hold 2-3 dia. Fresh tank 2-2 1/2 dia. Aft well 1-2 1/2 dia. Jummal bilge 1-2 dia. Turbine recess 1-2 dia. Turbine deck 2-2 1/2 dia. 1/4 tank 2-3 1/2 dia. 2-2 1/2 dia. For coefficient 1-2 1/2 dia. Aft coefficient 1-2 1/2 dia. For coefficient 1-2 1/2 dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size one 5 dia Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size _____ 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 Both

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 11490 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? ✓

IS A DONKEY BOILER FITTED? No 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 11-12-35 Main Boilers 31-1-36 Auxiliary Boilers 26-11-35 Donkey Boilers ✓

(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 Propellers & I. Screw shaft. 1 Eccentric 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 Impeller shaft for air pump. 1 Set of valves, bucket & rod for each air pump. 1 Set check valves. 50 condenser 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

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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.

Dates of Survey while building
 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, 17, 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 *see entry gearing* 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 5-5/16" C 5-1/4" S 5-3/8" A 5-1/4"
 Crank shaft material *S.M. Steel* Identification Mark 2427 Thrust shaft material *S.M. Steel* Identification Mark *gearing*
 Intermediate shafts, material *S.M. Steel* Identification Marks 3260-3263 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 *see separate sheet*
 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).

Certificate to be sent to Newcastle-on-Tyne

The Surveyors are requested not to write on or below the space for Committee's Minute.

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

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

Committee's Minute
 Assigned + L.M.C. 5.37 (SFC)
 Fitted for oil fuel 5.37 F.P. above 150°F
 J.H. Matthews
 J.D., C.L.

