

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office JAN 14 1939

Date of writing Report

10

When handed in at Local Office

11/11 1939 Port of

Newcastle-on-Tyne

No. in Survey held at  
Reg. Book.

Date, First Survey

17 Jan/38

Last Survey

4 Jan

1939

(Number of Visits)

112

Gross 6935.26

Tons

Net 4227.97

90231 on the

S. S. TURKISTAN

Built at S. Shields By whom built J. Readhead &amp; Sons Ltd Yard No. 514 When built 1939

Engines made at South Shields By whom made J. Readhead &amp; Sons Ltd Engine No. 514 When made 1939

Boilers made at South Shields By whom made J. Readhead &amp; Sons Ltd Boiler No. 514 When made 1939

Registered Horse Power Owners Shirk Line (1923) Ltd Port belonging to London

Nom. Horse Power as per Rule 709 706 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes

Trade for which Vessel is intended General Cargo

**ENGINES, &c.**—Description of Engines Triple Expansion with L.P. Turbine D.R. Gear  
 Dia. of Cylinders 26 1/2 x 44 x 74 Length of Stroke 48 No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 14-1/2 as fitted 14-1/2 Crank pin dia. 14 3/4 Crank webs Mid. length breadth 1-9 1/2 Thickness parallel to axis 9 3/8  
 Intermediate Shafts, diameter as per Rule 14 as fitted 14 Thrust shaft, diameter at collars as per Rule 14-7/8 as fitted 14-7/8  
 Tube Shafts, diameter as per Rule 15-5/8 as fitted 15-5/8 Is the tube shaft fitted with a continuous liner Yes  
 Screw Shaft, diameter as per Rule 15-5/8 as fitted 15-5/8 Is the screw shaft fitted with a continuous liner Yes  
 Bronze Liners, thickness in way of bushes as per Rule 15-8 as fitted 15-8 Thickness between bushes as per Rule 15-8 as fitted 15-8 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  
 Length of Bearing in Stern Bush next to and supporting propeller 5-3  
 Propeller, dia. 18-9 Pitch 16-0 No. of Blades 4 Material Bronze whether Movable No Total Developed Surface 123 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 5 Stroke 24 Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 5 Stroke 24 Can one be overhauled while the other is at work Yes  
 Feed Pumps No. and size (2) 9 x 12 x 24 (1) 7 x 9 x 22 Pumps connected to the Main Bilge Line No. and size One Duplex 10 x 11 1/2 x 10 How driven Steam  
 Ballast Pumps, No. and size One Duplex 10 x 11 1/2 x 10 Lubricating Oil Pumps, including Spare Pump, No. and size Two 9 x 8 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 In Holds, &c. N°1 hold 2-3 dia N°2 hold 2-3 1/4 dia N°3 hold 2-3 1/4 dia N°4 hold 2-3 1/4 dia N°5 hold 2-3 1/4 dia N°6 hold 2-3 1/4 dia N°7 hold 2-3 1/4 dia N°8 hold 2-3 1/4 dia N°9 hold 2-3 1/4 dia N°10 hold 2-3 1/4 dia N°11 hold 2-3 1/4 dia N°12 hold 2-3 1/4 dia N°13 hold 2-3 1/4 dia N°14 hold 2-3 1/4 dia N°15 hold 2-3 1/4 dia N°16 hold 2-3 1/4 dia N°17 hold 2-3 1/4 dia N°18 hold 2-3 1/4 dia N°19 hold 2-3 1/4 dia N°20 hold 2-3 1/4 dia N°21 hold 2-3 1/4 dia N°22 hold 2-3 1/4 dia N°23 hold 2-3 1/4 dia N°24 hold 2-3 1/4 dia N°25 hold 2-3 1/4 dia N°26 hold 2-3 1/4 dia N°27 hold 2-3 1/4 dia N°28 hold 2-3 1/4 dia N°29 hold 2-3 1/4 dia N°30 hold 2-3 1/4 dia N°31 hold 2-3 1/4 dia N°32 hold 2-3 1/4 dia N°33 hold 2-3 1/4 dia N°34 hold 2-3 1/4 dia N°35 hold 2-3 1/4 dia N°36 hold 2-3 1/4 dia N°37 hold 2-3 1/4 dia N°38 hold 2-3 1/4 dia N°39 hold 2-3 1/4 dia N°40 hold 2-3 1/4 dia N°41 hold 2-3 1/4 dia N°42 hold 2-3 1/4 dia N°43 hold 2-3 1/4 dia N°44 hold 2-3 1/4 dia N°45 hold 2-3 1/4 dia N°46 hold 2-3 1/4 dia N°47 hold 2-3 1/4 dia N°48 hold 2-3 1/4 dia N°49 hold 2-3 1/4 dia N°50 hold 2-3 1/4 dia N°51 hold 2-3 1/4 dia N°52 hold 2-3 1/4 dia N°53 hold 2-3 1/4 dia N°54 hold 2-3 1/4 dia N°55 hold 2-3 1/4 dia N°56 hold 2-3 1/4 dia N°57 hold 2-3 1/4 dia N°58 hold 2-3 1/4 dia N°59 hold 2-3 1/4 dia N°60 hold 2-3 1/4 dia N°61 hold 2-3 1/4 dia N°62 hold 2-3 1/4 dia N°63 hold 2-3 1/4 dia N°64 hold 2-3 1/4 dia N°65 hold 2-3 1/4 dia N°66 hold 2-3 1/4 dia N°67 hold 2-3 1/4 dia N°68 hold 2-3 1/4 dia N°69 hold 2-3 1/4 dia N°70 hold 2-3 1/4 dia N°71 hold 2-3 1/4 dia N°72 hold 2-3 1/4 dia N°73 hold 2-3 1/4 dia N°74 hold 2-3 1/4 dia N°75 hold 2-3 1/4 dia N°76 hold 2-3 1/4 dia N°77 hold 2-3 1/4 dia N°78 hold 2-3 1/4 dia N°79 hold 2-3 1/4 dia N°80 hold 2-3 1/4 dia N°81 hold 2-3 1/4 dia N°82 hold 2-3 1/4 dia N°83 hold 2-3 1/4 dia N°84 hold 2-3 1/4 dia N°85 hold 2-3 1/4 dia N°86 hold 2-3 1/4 dia N°87 hold 2-3 1/4 dia N°88 hold 2-3 1/4 dia N°89 hold 2-3 1/4 dia N°90 hold 2-3 1/4 dia N°91 hold 2-3 1/4 dia N°92 hold 2-3 1/4 dia N°93 hold 2-3 1/4 dia N°94 hold 2-3 1/4 dia N°95 hold 2-3 1/4 dia N°96 hold 2-3 1/4 dia N°97 hold 2-3 1/4 dia N°98 hold 2-3 1/4 dia N°99 hold 2-3 1/4 dia N°100 hold 2-3 1/4 dia  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One 10 1/2 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 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  
 What Pipes pass through the bunkers Bilge side ports How are they protected Wood casings  
 What 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 Top platform

MAIN BOILERS, &amp;c.—(Letter for record S) Total Heating Surface of Boilers 8994 sq. ft.

Is Forced Draft fitted Yes No. and Description of Boilers 3 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 2-11-37 Main Boilers 20-5-37 Auxiliary Boilers Donkey Boilers (If not state date of approval)

Superheaters Yes General Pumping Arrangements 11-1-38 Oil fuel Burning Piping Arrangements 11-1-38

## SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied

1 Steam + 1 Exhaust poppet valve + bush. 1 Set poppet valve springs. 1 Poppet valve spindle + extension spindle. 1 Valve spindle. 1 Shaft + impeller for air pump. 1 Steam + 1 Exhaust valve cam. 1 Spare screw shaft c.l. 1 Air pump bucket + rod. 1 Eccentric shaft. 1 Top + bottom halves main bearings. 1 Set of valves, bucket + rod for each auxiliary. 4 Bolts for poppet valves. 2 Safety valve springs. 50 Condenser tubes + 200 ferrules. 24 Boiler tubes. 6 Patent stoppers. 6 Plain stoppers. 2 Main bearing bolts. Full set fire ring bars for one boiler.

FOR JOHN READHEAD &amp; SONS, LTD.

The foregoing is a correct description,

Manufacturer.

CHAIRMAN &amp; MANAGING DIRECTOR.

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Lloyd's Register  
Foundation



1938  
Jan 7. 18. Feb 15. May 2. 6. 10. 11. 16. 19. 23. 25. 26. 30. 31. June 3. 9. 13. 16. 27. 29. 30. July 1. 7. 18. 19. 28.  
During progress of work in shops - - 29. Aug. 2. 3. 5. 8. 9. 10. 11. 16. 17. 19. 22. 23. 24. 25. 26. Sep. 1. 5. 7. 9. 12. 13. 14. 15. 16. 19. 20. 21. 22. 23. 26. 27. 29.  
Dates of Survey while building - - 30. Oct. 3. 5. 6. 7. 10. 11. 12. 13. 14. 17. 18. 20. 24. 25. 26. 27. 28. 31. Nov. 1. 2. 4. 7. 9. 10. 11. 14. 15. 16. 17. 18. 21. 22. 23. 24. 29.  
During erection on board vessel - - 30. Dec. 2. 5. 6. 7. 8. 12. 14. 15. 16. 19. 20. 21. 22. 28. 1939 Jan. 4.  
Total No. of visits 112.

Dates of Examination of principal parts—Cylinders 31-10-38 Slides 31-10-38 Covers 31-10-38  
Pistons 31-10-38 Piston Rods 2-11-38 Connecting rods 2-11-38  
Crank shaft 26-10-38 Thrust shaft 18-10-38 Intermediate shafts 8-12-38  
Tube shaft ✓ Screw shaft 20-10-38 Propeller 20-10-38  
Stern tube 7-10-38 Engine and boiler seatings 15-11-38 Engines holding down bolts 12-12-38  
Completion of fitting sea connections 20-10-38  
Completion of pumping arrangements 4-1-39 Boilers fixed 8-12-38 Engines tried under steam 8-12-38  
Main boiler safety valves adjusted 8-12-38 Thickness of adjusting washers P- $\frac{3}{16}$  C- $\frac{3}{16}$  S- $\frac{3}{16}$  S- $\frac{3}{16}$   
Crank shaft material S.M. Steel Identification Mark 3336 Thrust shaft material S.M. Steel Identification Mark 7605  
Intermediate shafts, material S.M. Steel Identification Marks 3773 3776 3774 3777 Tube shaft, material ✓ Identification Mark 15-2-38  
Screw shaft, material S.M. Steel Identification Mark 3779 Steam Pipes, material S.S. Steel Test pressure 660 lbs Date of Test 4-10-38  
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 'SHAHRISTAN'.

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. Materials & workmanship are good. The machinery was satisfactorily tested on mooring & sea trials & in my opinion is eligible for classification with records of +L.M.C. 1, 39. F.D. C.L. 35.B. (Sht) Fitted for oil fuel 1, 39. F.P. above 150°F.

The amount of Entry Fee ... £ 6 : 0 : When applied for, 7.1.1939.  
Special ... £ 105 : 10 :  
Donkey Boiler Fee ... £ ✓ : ✓ :  
Travelling Expenses (if any) £ ✓ : ✓ :  
When received, 13.1.1939.  
J. H. Matthews  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 20 JAN 1939

Assigned

+ L.M.C. 1.39 F.D. CL.  
Fitted for oil fuel 1.39 F.P. above 150°F.



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