

Rpt. 4.

REPORT ON MACHINERY.

No. 43607

Date of writing Report 19 _____ When handed in at Local Office _____ Port of Glasgow WFO. 7 MAY. 1924

No. in Survey held at Coatbridge Date, First Survey 17th Janv. Last Survey 20th April 1924
 Reg. Book. _____ (Number of Visits 16)

on the S.S. "KHUZISTAN"

Master _____ Built at Amble. By whom built Amble & Co. Tons { Gross 871
 Net 374
 When built _____

Engines made at Coatbridge By whom made W^m Beardmore & Co. Ltd No 603 when made 1924

Boilers made at Jams. By whom made Palmer's Ltd. when made 1924

Registered Horse Power _____ Owners British Tanker Co. Ltd. Port belonging to _____

Nom. Horse Power as per Section 28 102 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion. No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 14.23.38 Length of Stroke 24 Revs. per minute 111 Dia. of Screw shaft 8.03 Material of screw shaft Steel
 as per rule 8.03 as fitted 8.2

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss Yes If the liner is in more than one length are the joints burned 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 _____ Length of stern bush 3'-0"

Dia. of Tunnel shaft 7.1 Dia. of Crank shaft journals 4.45 Dia. of Crank pin 4.98 Size of Crank webs 15" x 4 1/2" Dia. of thrust shaft under collars 4.98 Dia. of screw 10'-0" Pitch of Screw 9'-9" No. of Blades 4 State whether moveable No Total surface 40 sq

No. of Feed pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps Lead 6" x 4" x 6" Ball 6" x 4" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2 @ 2 1/2" 1 @ 2 1/4" In Holds, &c. 2 @ 2 1/2" No 1, 2 @ 2 1/4" No 2

No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size 2 1/2"

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible _____

Are all connections with the sea direct on the skin of the ship Yes Are they 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 Discharge Pipes 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 are carried through the bunkers _____ How are they protected _____

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

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Is the Screw Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____

BOILERS, &c.—(Letter for record _____) Manufacturers of Steel See report attached

Total Heating Surface of Boilers 1850 sq Is Forced Draft fitted No No. and Description of Boilers 1 ISB. See report attached

Working Pressure 180 Tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____

Can each boiler be worked separately _____ Area of fire grate in each boiler _____ No. and Description of Safety Valves to each boiler _____

Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____

Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers _____ Length _____ Material of shell plates _____

Thickness _____ Range of tensile strength _____ Are the shell plates welded or flanged _____ Descrip. of riveting: cir. seams _____ long. seams _____ Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____

Per centages of strength of longitudinal joint _____ Working pressure of shell by rules _____ Size of manhole in shell _____

Size of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____

Length of plain part _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____

Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____

Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____

Material of stays _____ Area at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____

Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____

Area at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____

Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____

Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____

Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of stays in each _____

Working pressure by rules _____ Steam dome: description of joint to shell _____ % of strength of joint _____

Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____

Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

SUPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____

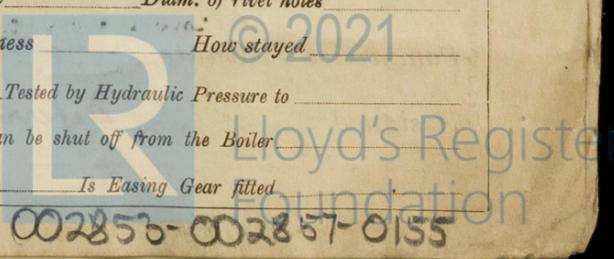
Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____

Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

If not, state whether, and when, one will be sent

Is a Report also sent on the Hull of the Ship?

a.l.
5/5/24



IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? *-*

SPARE GEAR. State the articles supplied:— 2 connecting rods top end 2 connecting rods bottom end 2 main bearings, 1 set coupling bolts & nuts, 1 set feed & bilge pump valves, 1 set piston springs for each piston, a quantity of assorted bolts & nuts of iron of various sizes, 1 set feed check valves, 1 set ballast pump, 1 set air pump valves, 1 spare c. 1 propeller, 1 spare tail end shaft, 3 boiler tubes spare parts for oil fuel installation

The foregoing is a correct description,

WILLIAM BEARDMORE & CO. LTD. *Johnson* Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924 Jan 17, 31 Feb 12, 15, 19, 28 Mar 7, 13, 25 Apr 2, 4, 14, 17, 22, 26, 29 During erection on board vessel - - - 1924 April 15, May 22, 23, 26, 30, June 5, 10, 12, 13, 16, 17, 18, 19, 20. Total No. of visits 16 + 14

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 19/2/24 Slides 4/4/24 Covers 19/2/24 Pistons 12/2/24 Rods 4/4/24 Connecting rods 4/4/24 Crank shaft 7/3/24 Thrust shaft 14/4/24 Tunnel shafts ✓ Screw shaft 14/4/24 Propeller 14/4/24 Stern tube 14/4/24 Steam pipes tested 13/6/24 Engine and boiler seatings 26/5/24 Engines holding down bolts 5/6/24 Completion of pumping arrangements 16/6/24 Boilers fixed 20/6/24 Engines tried under steam 20/6/24 Completion of fitting sea connections 10/6/24 Stern tube 10/6/24 Screw shaft and propeller 10/6/24 Main boiler safety valves adjusted 20/6/24 Thickness of adjusting washers P5" S76 LLOYDS 244 14-4-24 JD Material of Crank shaft S. Identification Mark on Do. 4-3-24 JA Material of Thrust shaft S. Identification Mark on Do. " Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S. Identification Marks on Do. " Material of Steam Pipes S.T. COPPER ✓ Test pressure 400lbs ✓

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 Section 49 of the Rules been complied with *Yes*

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. *The machinery has been built under special survey in accordance with the Rules of this Society. The materials and workmanship are good. The machinery has been shipped to Palmers Ltd. Hebburn. for fitting on board the vessel. Newcastle surveyors notified.*)

In my opinion, this vessel is eligible for record of + LMC (with date) when the machinery has been securely fitted on board, and tried under steam with satisfactory results.

The machinery & boiler have been satisfactorily fitted in the vessel & afterwards tried under full working conditions. In my opinion the machinery is now eligible to have the notation LMC 6-24 (Survey authorized) marked in Red in the builder's Report book (per health 9/11/24) also fitted for oil fuel (F.P. over 150°F)

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 6.5.1924 Special 2/5. £ 10 : 4 : 0 When received, 28.6.24 Donkey Boiler Fee ... £ 5 - 2 - 0 Travelling Expenses (if any) £ ✓

J.A. Avery & Charlotte Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW* Assigned *Deferred* -6 MAY 1924

FRI 4 JUL 1924 + Lumb 6.24 L Fitted for oil fuel 6.24 57. above 130°F

Rpt. 5. Date of writing No. in Reg. Book. Master Engines made Boilers made Registered Ho MULTITU (Letter for re Boilers No. of Certifi safety valves Are they fitted Smallest disto Material of s Descrip. of r Lap of plates rules 18 boiler 38 Description of plates: Mater Top 9x9 smallest part Pitch of stays Area supporte Lower back p Pitch of tubes water spaces girder at cent Working press

Certificate (if required) to be sent to

The Surveyors are requested to write on or below the space for Committee's Minute.

