

Rpt. 4.

NEWCASTLE-ON-TYNE Report No. 78021
REPORT ON MACHINERY.

No. 43607

Date of writing Report 19 When handed in at Local Office 19 Port of Glasgow WED. 7 MAY. 1924
No. in Survey held at Coatbridge Date, First Survey 17th Jan. Last Survey 20th April 1924
Reg. Book. on the S.S. "KHUZISTAN" (Number of Visits 16)
Master Built at Amble. By whom built Amble & B Co. Tons { Gross 871
Engines made at Coatbridge By whom made W^m Beardmore & Co. Ltd No 603 when made 1924 Net 374
Boilers made at James. By whom made Palmers Ltd. when made 1924
Registered Horse Power Owners British Tankers 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 as per rule 8.03" Material of screw shaft as fitted 8 1/2" Steel.
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 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 as per rule 7.1" Dia. of Crank shaft journals as per rule 4.45" Dia. of Crank pin 4 7/8" Size of Crank webs 15" x 4 1/2" Dia. of thrust shaft under collars 4 7/8" 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 Feed 6" x 4" x 6" Ballast 8" 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 3/4" 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 Both
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 SB. the 1st small
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 rivets 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 top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom Thickness of plates bottom
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

IS A DONKEY BOILER FITTED?

No ✓

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 connecting rod top end 2 connecting rod bottom end 2 main bearings, 8 1/2" nut couplings both 8" nuts 1 set feed 8" bilge pump valves, 1 set piston springs for each piston, a quantity of assorted bolts & nuts & iron of various sizes, 1 set feed check valves, 1 set ballast pump, 8 1/2" 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,

BEARDMORE & CO. LTD. 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 $P\frac{5}{8}$ S $\frac{5}{8}$
Material of Crank shaft S. Identification Mark on Do. 4-324 JA Material of Thrust shaft S. Identification Mark on Do. 14-424 JD
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts S. Identification Marks on Do. ✓
Material of Steam Pipes S.D. COPPER ✓ Test pressure 400 lbs. ✓

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 Register book (per Houlth. 9/11/24) also fitted for oil fuel (F.P. over 150°F)

The amount of Entry Fee ... £ 3 : 0 : 0

When applied for,

Special

7/5/24 £ 10 : 4 : 0

Donkey Boiler Fee ... £ 5 : 2 : 0

Travelling Expenses (if any) £

Committee's Minute

Assigned

Deferred

GLASGOW

6 MAY 1924

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

FRI 4 JUL 1924

+ Lmb 6.24 C.L.
Fitted for oil fuel 6.24
F.P. above 150°F

Rpt. 5.

Date of writing

No. in S
Reg. Book.

Master

Engines made

Boilers made

Registered Ho

MULTITU

(Letter for re

Boilers

No. of Certifi

safety valves

Are they fitted

Smallest dista

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

radius of do.

thickness of ju

lates

thickness of w

Dates

Survey

while

boa

Total

Lloyd's Register
Foundation