

REPORT ON MACHINERY

No. 18252

Received at London Office

WED. JUL 2 1924

of writing Report 20. 6. 1924 When handed in at Local Office 23. 6. 1924 Port of GREENOCK

in Survey held at Greenock Date, First Survey 10th January 1923. Last Survey 13. 6. 1924
Book. on the S/S "Alari" (Number of Visits 70)

ter Built at Glasgow By whom built Lithgow & Co (456) Tons { Gross Net }
When built 1924

nes made at Greenock By whom made Rankin, Blackmore & Co (402) when made 1924

rs made at ditto By whom made ditto (402) when made 1924

stered Horse Power Owners Boulton & Watt & Co Port belonging to Glasgow
Horse Power as per Section 28 394 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
of Cylinders 24"-40"-67" Length of Stroke 45" Revs. per minute 70 Dia. of Screw shaft as per rule 13.85" Material of screw shaft S
as fitted 14.314" Is the after end of the liner made water tight

screw shaft fitted with a continuous liner the whole length of the stern tube Yes If the liner does not fit tightly at the part
the propeller boss Yes If the liner is in more than one length are the joints burned No 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 No If two

s are fitted, is the shaft lapped or protected between the liners No Length of stern bush 59"

of Tunnel shaft as per rule 12.55" Dia. of Crank shaft journals as per rule 13.19" Dia. of Crank pin 13.12" Size of Crank webs 19.834" Dia. of thrust shaft under
as fitted 12.58" as fitted 13.12" No. of Blades 4 State whether moceable Yes Total surface 904

rs 13.12" Dia. of screw 16.6" Pitch of Screw 18.0" No. of Blades 4 State whether moceable Yes Total surface 904
of Feed pumps 2 Diameter of ditto Pair of 74.21" Stroke Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 4" Stroke 22" Can one be overhauled while the other is at work Yes
of Donkey Engines 2 Sizes of Pumps 74.21" 12.24" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 3 at 3" Cofferdam 1-2 1/4" Tunnel Drill 2 1/4" In Holds, &c. 91° 1. 2. 23/4 91° 2. 2. 3" 91° 3. 2. 23/4
70.4. 2 23/4" Stowhold 2. 3"

of Bilge Injections 1 sizes 8" Connected to condenser to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 2-4 1/2"
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 No

all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks No
they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates Yes Are the Discharge Pipes above or below the deep water line

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
at pipes are carried through the bunkers Bilge Suction How are they protected Wood casing

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from U E R Platform
MILLERS, &c.—(Letter for record R.) Manufacturers of Steel Colvill, Steel Co of Scotland & Dunlop, Spencer

al Heating Surface of Boilers 5384# Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended
orking Pressure 200 Tested by hydraulic pressure to 350 Date of test 15. 2. 23 No. of Certificate 1646

each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2# No. and Description of Safety Valves to
boiler Double Spring Area of each valve 11.04" Pressure to which they are adjusted 205 Are they fitted with easing gear Yes

allest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 15.9" Length 12.0" Material of shell plates S
ickness 17/16" Range of tensile strength 28-32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams DR

1. seams T R. D B S Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10 1/4" Lap of plates or width of butt straps 1'-10"
centages of strength of longitudinal joint rivets 92.4% Working pressure of shell by rules 203 Size of manhole in shell 16x12"

e of compensating ring 2 1/8 x 3 1/8 x 1 7/16 No. and Description of Furnaces in each boiler 3 Boringak Material S Outside diameter 4-1 1/4"
ngth of plain part top bottom Thickness of plates crown 7 1/2 x 6 1/4 Description of longitudinal joint weld No. of strengthening rings

orking pressure of furnace by the rules 202 Combustion chamber plates: Material S Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 13/16
ch of stays to ditto: Sides 9 3/8 x 9 1/2 Back 9 x 9 3/4 Top 9 1/2 x 9 3/8 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 204

aterial of stays Iron Area at smallest part 2.03 2.71 Area supported by each stay 84.9# Working pressure by rules 206 End plates in steam space:
aterial S Thickness 13/8" Pitch of stays 1-6 3/8"-1-10 3/4" How are stays secured D N Working pressure by rules 205 Material of stays S

ea at smallest part 7.84# Area supported by each stay 422.8# Working pressure by rules 206 Material of Front plates at bottom S
ickness 15/16" Material of Lower back plate S Thickness 13/16" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 204

iameter of tubes 23/4" Pitch of tubes 4" Material of tube plates S Thickness: Front 15/16 D P Back 25/32 Mean pitch of stays 10"
ch across wide water spaces 13 1/2" Working pressures by rules 206 Girders to Chamber tops: Material S Depth and
ickness of girder at centre 1 1/4 + 13/16 (2) Length as per rule 34 1/2" Distance apart 9 1/2" Number and pitch of stays in each 3 at 9 3/8"

orking pressure by rules 202 Steam dome: description of joint to shell % of strength of joint
iameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

itch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
PERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

ate of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
iameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

SPARE GEAR. State the articles supplied:—

2 Coumbling rod bolts, nuts for top end. ditto for bottom end, 2 main bearing bolts, 1 set of coupling bolts, 1 set of Feed Bridge Pump, 1 set of a quantity of assorted bolts, nuts & iron of various sizes

The foregoing is a correct description,

RANKIN & BLACKMORE, LTD.,

A. J. Rankin

Director.

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1923 Jan. 10-18-24-29 Feb. 1-7-12-19-22-28 Mar. 28-12-20-26-29 Apr. 3-4-12-17-25-27 May 2-8-16-22-25-29 June 6-12-19 July 13-24 Aug 8-16-28 Sept 5-12-17 Oct 1-8-29 Nov 10-18-1924 Jan 8-17-24 Feb 5-11-19-26 Mar 4-10-20-26 Apr 2-17-22-29 May 1-5-7-16-26 June 3-5-6-13-18-23 Total No. of visits 70

Is the approved plan of main boiler forwarded herewith

Yes

Is the approved plan of donkey boiler forwarded herewith

Yes

Dates of Examination of principal parts: Cylinders 1- 11- 23 Slides 4- 3 24 Covers 1- 11- 23 Pistons 5- 2- 24 Rods 4- 3- 24

Connecting rods 5- 2 24 Crank shaft 5- 2- 24 Thrust shaft 23- 4- 24 Tunnel shafts 23- 4- 24 Screw shaft 23- 4- 24 Propeller 4- 3- 24

Stern tube 23- 4- 24 Steam pipes tested 13- 6- 24 Engine and boiler seatings 22- 4- 24 Engines holding down bolts 6- 6- 24

Completion of pumping arrangements 6- 6- 24 Boilers fixed 3- 6- 24 Engines tried under steam 23- 6- 24

Completion of fitting sea connections 5- 5- 24 Stern tube 5- 5- 24 Screw shaft and propeller 5- 5- 24

Main boiler safety valves adjusted 18- 6- 24 Thickness of adjusting washers P 7/16 SV 1/2 PV 3/8 SV 3/8 P 3/8 S 3/8 F

Material of Crank shaft S Identification Mark on Do. 1936 6625 Material of Thrust shaft S Identification Mark on Do. 1937

Material of Tunnel shafts S Identification Marks on Do. 1935-4-7-8-9 Material of Screw shafts S Identification Marks on Do. 1939

Material of Steam Pipes LW Iron Test pressure 600 lb

Is an installation fitted for burning oil fuel 970 Is the flash point of the oil to be used over 150° F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case Yes If so, state name of vessel s/s 'Jehangir' on Reg. No. 18216

General Remarks (State quality of workmanship, opinions as to class, &c.)

These Engines & Boilers have been built under special survey in accordance with the approved plans & the material & workmanship are of good quality. They have now been securely fitted on board, tried under steam & found satisfactory.

The machinery is eligible in my opinion for the record of LMC 6-24

Approved

It is submitted that this vessel is eligible for THE RECORD. + LMC 6. 24. FD. CL.

J.W.D. 3/7/24

W. Gordon-Mitchell Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : - : When applied for, Special ... £ 84 : 2 : 25-6-1924 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 26-6-1924

Committee's Minute GLASGOW - 1 JUL 1924 CERTIFICATE WRITTEN 4-7-24

Assigned + LMC 624 W.S.M.



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