

REPORT ON MACHINERY.

No. 18216

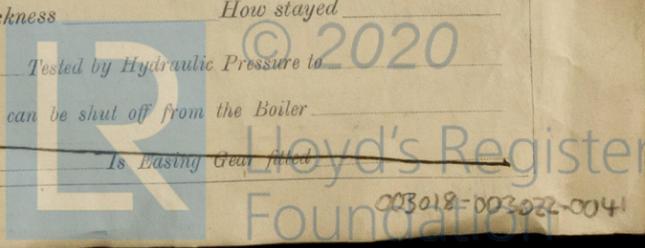
Received at London Office WFO. 14 MAY. 1924

Date of writing Report 16. 4. 1924 When handed in at Local Office 8th May, 1924. Port of Greenock
 No. in Survey held at Greenock Date, First Survey 10th January, 1923 Last Survey 5. 5. 1924
 Reg. Book. S/S "Jehangir" (Number of Visits 13.)
 on the
 Master Built at Greenock By whom built Lithgow & Co (155) When built 1924
 Engines made at Greenock By whom made Rankine & Blackmore (40) when made 1924
 Boilers made at ditto By whom made ditto (40) when made 1924
 Registered Horse Power Owners Bombay Poria Steam Nav Co Port belonging to Bombay
 Nom. Horse Power as per Section 28 394 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 24"-40"-67" Length of Stroke 45 Revs. per minute 70 Dia. of Screw shaft 13.85 Material of screw shaft S
 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 - If two
 liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 59
 Dia. of Tunnel shaft 12.56 as per rule 12.56 Dia. of Crank shaft journals 13.19 as per rule 13.19 Dia. of Crank pin 13.2 Size of Crank webs 19.874 Dia. of thrust shaft under
 collars 13.2 as fitted 12.56 Dia. of screw 16.6 Pitch of Screw 18.0 No. of Blades 4 State whether moceable Yes Total surface 900
 No. of Feed pumps 2 Diameter of ditto 4 Stroke 22 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 22 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 7+21 12+24 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 at 3' Cofferdam 1-2 1/4 Tunnel Well 2 1/4 In Holds, &c. 7°14 Hold - 2-2 3/4 7°2 - 2 - 3 7°3 - 2-2 3/4
7°4 - 2 - 2 3/4 Stohold 2.3
 No. of Bilge Injections 1 sizes 8 Connected to condenser to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 2-4 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
 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 Bilge Suction How are they protected good canvas
 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 Yes Is it fitted with a watertight door Yes worked from U.E.R. Platform

BOILERS, &c.—(Letter for record (R) Manufacturers of Steel James Doulton, Steel Co, Spencer, Colville
2SB
 Total Heating Surface of Boilers 5384 Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended
 Working Pressure 200 Tested by hydraulic pressure to 350 Date of test 15. 2. 23 No. of Certificate 1640
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63 1/2 No. and Description of Safety Valves to
 each boiler Double Spring Area of each valve 1104 Pressure to which they are adjusted 205 Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 13 Mean dia. of boilers 15.9 Length 12.0 Material of shell plates S
 Thickness 17/16 Range of tensile strength 28-32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams DR
 long. seams TR.DBS 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
 Per centages of strength of longitudinal joint 92.4 Working pressure of shell by rules 203 Size of manhole in shell 16x12
 Size of compensating ring 24 3/8 x 31 7/8 x 17/16 No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 4-11 1/4
 Length of plain part 34 1/2 Thickness of plates 34 1/2 Description of longitudinal joint weld No. of strengthening rings -
 Working 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
 Pitch 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
 Material of stays Iron Area at smallest part 203-271 Area supported by each stay 84.9 Working pressure by rules 206 End plates in steam space:
 Material S Thickness 13/8 Pitch of stays 1-6 7/8 - 1-10 3/4 How are stays secured DN Working pressure by rules 205 Material of stays S
 Area at smallest part 4.84 Area supported by each stay 422.8 Working pressure by rules 206 Material of Front plates at bottom S
 Thickness 13/16 Material of Lower back plate S Thickness 13/16 Greatest pitch of stays 13/2 Working pressure of plate by rules 204
 Diameter of tubes 2 3/4 Pitch of tubes 4 Material of tube plates S Thickness: Front 13/16 DP Back 25/32 Mean pitch of stays 10
 Pitch across wide water spaces 13 1/2 Working pressures by rules 206 Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 1 1/4 x 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
 Working pressure by rules 202 Steam dome: description of joint to shell - % of strength of joint

Forecastle ✓
 is to be given -
 CELLULAR ✓
 length. Water Capa 74
 Feet. Tons. 36
 No. of Visits 99
 Date of Test 14. 18. 25. 27. 1924
 Diameter of Safety Valve 99 Pressure to which each is adjusted 200



IS A DONKEY BOILER FITTED? *yes* If so, is a report now forwarded? *yes*

SPARE GEAR. State the articles supplied: - 2 Connecting Rod Bolts, 2 Nuts for top end, ditto for bottom ends, 2 main bearing bolts, 1 set of Coupling bolts, 1 set of Feed, Bilge Pump Gaskets, 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 2-8-12-16-20-26-29, Apr 3-6-12-17-25-27, May 2-8-16-22-25-29, June 6-12-19, July 13-24, Aug 8-16-28, Sept 5-10-2-17, Nov 1-8-29, Dec 10-18 (1924) Jan 8-17-24, Feb 5-11-15-19-26, Mar 4-7-10-12-14-17-21-25-26-28-31, Apr 8-15-17-18-23-25-28, May 2-3. Total No. of visits 73.

Is the approved plan of main boiler forwarded herewith? *yes*
" " " donkey " " " *yes*

Dates of Examination of principal parts: Cylinders 16-8-23, Slides 1-11-23, Covers 16-8-23, Pistons 2-10-23, Rods 18-12-23, Connecting rods 18-12-23, Crank shaft 10-3-24, Thrust shaft 21-3-24, Tunnel shafts 21-3-24, Screw shaft 10-3-24, Propeller 5-2-24, Stern tube 5-2-24, Steam pipes tested 25-4-24, Engine and boiler seatings 17-3-24, Engines holding down bolts 25-4-24, Completion of pumping arrangements 5-5-24, Boilers fixed 17-4-24, Engines tried under steam 5-5-24, Completion of fitting sea connections 17-3-24, Stern tube 17-3-24, Screw shaft and propeller 17-3-24, Main boiler safety valves adjusted 2-5-24, Thickness of adjusting washers P 2 1/2 S 2 1/2 P 2 1/2 S 2 1/2 P 2 1/2 S 2 1/2, Material of Crank shaft S, Identification Mark on Do. 6625 WGM, Material of Thrust shaft S, Identification Mark on Do. 11380 TJ WGM, Material of Tunnel shafts S, Identification Marks on Do. 1970, 1975, 1976, Material of Screw shafts S, Identification Marks on Do. 6652 WGM, Material of Steam Pipes Iron, Test pressure 600 lbs.

Is an installation fitted for burning oil fuel? *Yes* 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? *Yes*

Is this machinery duplicate of a previous case? *Yes* If so, state name of vessel

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 workmanship & material 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 5-24.

It is submitted that this vessel is eligible for THE RECORD. + LMC 5. 24. FD. CL.

CERTIFICATE WRITTEN 20/5/24 (dated 14/5/24)

J. W. D. C. M. S.
16/5/24

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

The amount of Entry Fee ... £ 5 : -
Special ... £ 84 : 2
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, 8th May 1924
When received, 8th May 1924

Committee's Minute GLASGOW 13 MAY 1924

Assigned + LMC 524

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J. G.



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Greenock

Certificate (if required) to be sent to

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

Date of writing Report
No. in Survey
Reg. Book.
on the
Master
Engines made at
Boilers made at
Registered Horse P
MULTITUBU
(Letter for record
Boilers on S
No. of Certificate
safety valves to each
Are they fitted with
Smallest distance be
Material of shell p
Descrip. of riveting
Lap of plates
rules 127
boiler 2 plain
Description of longit
plates: Material S
Top 9 1/8 x 1 1/8 If sta
smallest part 1 1/4
Pitch of stays 2 1/2
Area supported by
Lower back plate
Pitch of tubes 4 1/8
water spaces 1
girder at centre 1/2
Working pressure b
Diameter
Pitch of rivets
SUPERHEATE
Date of Test
Diameter of Safety V
Dates of Survey while building
During progress of work in shops
During erection on board vessel
GENERAL P
Special S
material
Plus Rept
Survey Fee
Travelling Exp
Committee's J
Assigned