

REPORT ON MACHINERY.

No. 29327.

THUR. 29 SEP 1910

Received at London Office

State of writing Report 10 When handed in at Local Office 10 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 27th January Last Survey 1st Sept. 1910
 Reg. Book. on the T. S. S. "Kursk" (Number of Visits)
 Master Built at Glasgow By whom built Barday Cude & Co. Ltd (S. 482) Tons { Gross 7858
 Engines made at Glasgow By whom made Barday Cude & Co. Ltd (S. 482) Net 4718
 Boilers made at do By whom made do (S. 482) When built 1910
 Registered Horse Power 1020 Owners Russian East Asiatic Co. Ltd. when made 1910
 Nom. Horse Power as per Section 28 1020 Is Refrigerating Machinery fitted for cargo purposes No Port belonging to Liban
 Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Quadruple Expansion No. of Cylinders 8 No. of Cranks 8
 Dia. of Cylinders 34", 33", 47", 68" Length of Stroke 48" Revs. per minute as per rule Dia. of Screw shaft as fitted 14 1/8" Material of 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 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 Length of stern bush 4-8 1/2"
 Dia. of Tunnel shaft as per rule 12 1/2" Dia. of Crank shaft journals as per rule 13 1/2" Dia. of Crank pin 13 1/2" Size of Crank webs 9 1/4 x 2 1/2" Dia. of thrust shaft under
 collars 13 1/2" Dia. of screw 16-6 Pitch of Screw 19-6" No. of Blades 3 State whether moveable Yes Total surface 69.5 sq ft
 No. of Feed pumps 2 Diameter of ditto 10" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 4 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 5 Duplex Sizes of Pumps 10 1/4 x 10: 8 x 10: 5 x 6: 4 x 6: 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 203 1/2 34 Rem 203 1/2 30 1/2 3 1/2 In Holds, &c. 711-2 213 1/2 712-2 203 1/2 713-2 203 1/2
714-2 213 1/2 715-1 213 1/2 Tunnel 80 1-3 1 1/2 2 1/2 3 1/2
 No. of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 1 1/2 2 1/2 3 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 Yes
 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 all above main
 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 Yes How are they protected Yes
 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
 Dates of examination of completion of fitting of Sea Connections 4. 7. 10 of Stern Tube 4. 7. 10 Screw shaft and Propeller 4. 7. 10
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top S.R. Platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Wm Beardmore
 Total Heating Surface of Boilers 15114 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 6 Single ended
 Working Pressure 215 lbs Tested by hydraulic pressure to 430 lbs Date of test 31. 5. 10 No. of Certificate 10413
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60.5 sq ft No. and Description of Safety Valves 10
 each boiler 2 Double Spring Area of each valve 829" Pressure to which they are adjusted 220 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2-0" Mean dia. of boilers 15-2" Length 11-6" Material of shell plates Steel
 Thickness 1 7/8" Range of tensile strength 29/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams O. R.
 long. seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 7/8" Pitch of rivets 10" Lap of plates or width of butt straps 22 7/8"
 Per centages of strength of longitudinal joint 83.75 Working pressure of shell by rules 251 lbs Size of manhole in shell 16" x 15"
 Size of compensating ring 2-10 x 2-6 x 1 1/8" No. and Description of Furnaces in each boiler 3 Single Material Steel Outside diameter 4-0 1/4"
 Length of plain part top 4-5" Thickness of plates bottom 6-4" Description of longitudinal joint weld No. of strengthening rings Yes
 Working pressure of furnace by the rules 241 Combustion chamber plates: Material Steel Thickness: Sides 1 1/8" Back 1 1/8" Top 1 1/8" Bottom 1"
 Pitch of stays to ditto: Sides 9" x 8" Back 8 1/2" x 8 1/2" Top 9" x 8" If stays are fitted with nuts or riveted heads No Working pressure by rules 225
 Material of stays Steel Diameter at smallest part 2-03 Area supported by each stay 72 Working pressure by rules 253 End plates in steam space:
 Material Steel Thickness 1 3/32" Pitch of stays 8 1/4" x 15 1/8" How are stays secured Fore and Aft Working pressure by rules 220 Material of stays Steel
 Diameter at smallest part 7-24 Area supported by each stay 297.6 Working pressure by rules 253 Material of Front plates at bottom Steel
 Thickness 3 1/32" Material of Lower back plate Steel Thickness 1 7/16" Greatest pitch of stays 14 1/4" x 8 1/2" Working pressure of plate by rules 220
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates Steel Thickness: Front 3 1/32" Back 2 5/32" Mean pitch of stays 7 1/2"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 224 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10" x 2 1/2" Length as per rule 2-9 3/32" Distance apart 9" Number and pitch of stays in each 3 @ 8"
 Working pressure by rules 224 Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description	Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Dia. of donkey boiler	Length		
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed and bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes: 1 propeller shaft: 2 propeller blades: etc.

The foregoing is a correct description,

FOR BARCLAY, CURLE & CO., LTD.

Manufacturer.

Chas Randolph Smith, Director

Dates of Survey while building	During progress of work in shops	1910. Jan. 27. Feb. 2. 4. 14. 22. Mar. 9. 10. 14. 17. 18. 21. Apr. 1. 6. 7. 12. 13. 14. 15. 19. 21. 22. 25. 27.
	During erection on board vessel	May 2. 3. 9. 11. 12. 23. 31. June 3. 6. 9. 14. 16. 21. 24. July 1. 4. 5. 11. 14. 25. Aug 3. 8. 9. 17. 18. 24. 30. Sept. 1.
Total No. of visits		52

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders	14. 3. 10	Slides	25. 4. 10	Covers	2. 5. 10	Pistons	7. 4. 10	Rods	1. 4. 10
Connecting rods	25. 4. 10	Crank shaft	7. 4. 10	Thrust shaft	25. 4. 10	Tunnel shafts	18. 3. 10	Screw shaft	31. 5. 10
Stern tube	25. 4. 10	Steam pipes tested	1. 7. 10	Engine and boiler seatings	4. 7. 10	Engines holding down bolts	18. 8. 10		
Completion of pumping arrangements	3. 8. 10	Boilers fixed	3. 8. 10	Engines tried under steam	1. 9. 10				
Main boiler safety valves adjusted	18. 8. 10	Thickness of adjusting washers	S ⁷ / ₁₆ P ¹ / ₂ S ³ / ₈ P ³ / ₈ S ³ / ₈ P ⁷ / ₁₆ S ³ / ₈ P ⁷ / ₁₆ S ⁷ / ₁₆ P ³ / ₈ S ⁷ / ₁₆ P ³ / ₈ S ⁷ / ₁₆ P ³ / ₈						
Material of Crank shaft	Steel	Identification Mark on Do.	482	Material of Thrust shaft	Steel	Identification Mark on Do.	482		
Material of Tunnel shafts	Steel	Identification Marks on Do.	482	Material of Screw shafts	Steel	Identification Marks on Do.	482		
Material of Steam Pipes	Wrought iron	Test pressure	645 lbs per sq in						

General Remarks (State quality of workmanship, opinions as to class, &c. These engines & boiler have been built under Special Survey in accordance with the approved plan & the workmanship & material are of good quality. The machinery is eligible in our opinion for the record of **LMC 9.10**

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.10.

JWD 30/9/10

The amount of Survey Fee..	£ 70 - 10	When applied for.	22/9/10
Special Entry..	£ 3 - 0		
Donkey Boiler Fee ..	£ :	When received,	25. 10. 10
Travelling Expenses (if any) £	:		

A. J. Thomas & Wm Gordon Sinclair
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASGOW

28 SEP. 1910

Assigned

+ LMC

9.10. 7.5.

MACHINERY CERTIFICATE
WRITTEN 29.9.10



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Certificate is required to be sent to the Registrar of Shipping (The Registrar is requested not to write on or below the space for Committee's Minute.)

28.9.10