

REPORT ON MACHINERY.

No. 24311
211301
FRI. OCT. 20. 1911

Received at London Office

Date of writing Report 18.10.11 When handed in at Local Office 18.10.11 Port of Hull
 No. in Survey held at Hull & Goole Date, First Survey Jan 7th Last Survey 5th Oct 1911
 Reg. Book. on the Steel S.S. 1091 9/10 SKELL (Number of Visits 55)
 Master _____ Built at _____ By whom built _____ Tons { Gross _____ Net _____ }
 Engines made at } Hull By whom made } Messrs Charles G. & Co when made 1911
 Boilers made at } " By whom made } " " " when made 1911
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Section 28 104 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 15" - 25" - 40" Length of Stroke 27" Revs. per minute 90 Dia. of Screw shaft 8.9" Material of screw shaft Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 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 _____
 If two liners are fitted, is the shaft lapped or protected between the liners No liners Length of stern bush 3'-6"
 Dia. of Tunnel shaft 7.83" Dia. of Crank shaft journals 7.82" Dia. of Crank pin 7.875 Size of Crank webs 15" x 5 1/2" Dia. of thrust shaft under collars 7.875 Dia. of screw 10.5 Pitch of Screw 12.25 feet No. of Blades 4 State whether moveable No Total surface 36 sq
 No. of Feed pumps Two Diameter of ditto 2 1/2" Stroke 18" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 2 1/2" Stroke 18" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps 6" x 4" x 6" + 6" x 4 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three, each 2". one 3 1/2" In Holds, &c. Two each 2" in fore aft holds, two each 3" in aft tank, one 3" to tunnel well, one each 3" to fore aft peak tanks
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 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 None
 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 above
 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 None 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
 Dates of examination of completion of fitting of Sea Connections 8.8.11 of Stern Tube 8.8.11 Screw shaft and Propeller 8.8.11
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Messrs W. Beardmore & Co
 Total Heating Surface of Boilers 1800 sq Is Forced Draft fitted No No. and Description of Boilers One cyl. Multi S. Ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 27.7.1911 No. of Certificate 1826
 Can each boiler be worked separately _____ Area of fire grate in each boiler 54 sq No. and Description of Safety Valves to each boiler Two Spring
 Area of each valve 5.93 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 14'-0" Length 10'-6" Material of shell plates S
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.
 long. seams O. B. S. J. R. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint rivets 95 Working pressure of shell by rules 183 lbs Size of manhole in shell end plate 16" x 12"
 flanged plate 85 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 40 1/2"
 Length of plain part top 6'-7 1/2" bottom _____ Thickness of plates crown 2 1/2" Description of longitudinal joint Welded No. of strengthening rings 0
 Working pressure of furnace by the rules 191 lbs Combustion chamber plates: Material S Thickness: Sides 3 1/2" Back 3 1/2" Top 3 1/2" Bottom 3 1/2"
 Pitch of stays to ditto: Sides 9 1/4" x 8" Back 9 1/2" x 8 1/2" Top 8 1/2" x 8" If stays are fitted with nuts or riveted heads No Working pressure by rules 199 lbs
 Material of stays S Diameter at smallest part 1 1/2" Area supported by each stay 77.66 sq Working pressure by rules 182 lbs End plates in steam space: Material S Thickness 1 5/32" Pitch of stays 16 3/4" x 18 1/2" How are stays secured O. N. Working pressure by rules 192 lbs Material of stays S
 Diameter at smallest part 2 1/16" Area supported by each stay 309.875 sq Working pressure by rules 207 lbs Material of Front plates at bottom S
 Thickness 1 5/16" Material of Lower back plate S Thickness 7/8" Greatest pitch of stays 13 1/2" x 9 1/2" Working pressure of plate by rules 199 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 7/8" x 4 3/4" Material of tube plates S Thickness: Front 1 5/16" Back 1 1/16" Mean pitch of stays 9 5/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 185 lbs Girders to Chamber tops: Material S Depth and thickness of girder at centre 9 1/2" x 1 5/8" Length as per rule 2'-9 1/16" Distance apart 8 1/4" Number and pitch of stays in each Three 8"
 Working pressure by rules 218 lbs Superheater or Steam chest; how connected to boiler _____ Can the superheater be shut off and the boiler worked separately _____
 Diameter _____ Length _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet _____
 Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____
 stiffened with rings _____ Distance between rings _____ Working pressure by rules _____ End plates: Thickness _____ How stayed _____
 Working pressure of end plates _____ Area of safety valves to superheater _____ Are they fitted with easing gear _____

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 _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Two each top and bottom end connecting rods bolts and nuts, two main bearing bolts and nuts, one set of coupling bolts and nuts, One set each air, circulating feed and bilge pump valves, Iron various sizes, and a quantity of assorted bolts, nuts etc.*

The foregoing is a correct description,
F. J. Palethorpe Manufacturer.

Dates of Survey while building

During progress of work in shops --	SECRETARY. 1911: Jan 7. 10. 12. 14. 19. Feb 2. 8. 10. 13. 15 Mar 6. 8. 13. 22. 23 Apr 5. 7.
During erection on board vessel ---	Apr 21. 25 May 1. 4. 9. 16. 19. 22. 25. 27. 30. 31 Jun 8. 12. 15. 19. 26. 28 July 7. 11. 14. 19
Total No. of visits	July 22. 25. 27. 29 Aug 5. 8. 9. 11. 14. 15. 16 55 Aug 21. 24. 30. Oct 5.

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

Dates of Examination of principal parts

Cylinders	19. 5. 11	Slides	12. 19. 6. 11	Covers	1. 5. 11	Pistons	21. 4. 11	Rods	19. 5. 11
Connecting rods	13. 3. 11	Crank shaft	9. 5. 11	Thrust shaft	5. 8. 11	Tunnel shafts	21. 8. 11	Screw shaft	8. 8. 11
Stern tube	19. 7. 11	Steam pipes tested	16. 8. 11	Engine and boiler seatings	5. 8. 11	Engines holding down bolts	16. 8. 11		
Completion of pumping arrangements	5. 10. 11	Boilers fixed	16. 8. 11	Engines tried under steam	5. 10. 11				
Main boiler safety valves adjusted	5. 10. 11	Thickness of adjusting washers	3/8" 3/8"						
Material of Crank shaft	S	Identification Mark on Do.	2728 YD H	Material of Thrust shaft	S	Identification Mark on Do.	2806 YD H		
Material of Tunnel shafts	S	Identification Marks on Do.	2806 YD H	Material of Screw shafts	S	Identification Marks on Do.	2806 YD H		
Material of Steam Pipes	Solid drawn Copper ✓ Test pressure 400 lbs per sq inch ✓								

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boiler of this vessel have been constructed under special survey in accordance with the Rules, the materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines, secured on board, and tested under steam, they are now in good order, and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of L.M.C. 10.11 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + LMG 10.11.

J.W.D.
 20/10/11

The amount of Entry Fee	£ 2	When applied for,	
Special	£ 15	18-10-1911	
Donkey Boiler Fee	£	When received,	
Travelling Expenses (if any)	£ 9	1.11.11	

James Barclay
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned

NOV 21 1911

+ LMG 10.11



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Certificate (if required) to be sent to

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