

REPORT ON MACHINERY.

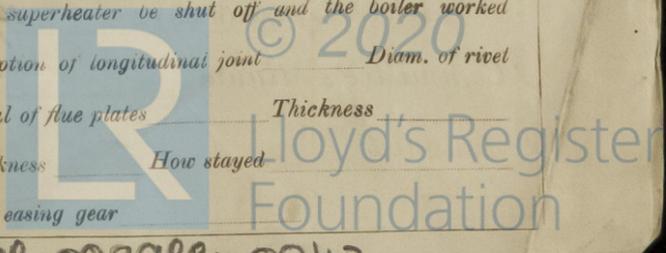
No. 7621
WED. OCT 30. 1912

Date of writing Report 28.10.12 When handed in at Local Office 28.10.12 Port of Middlesbrough
 No. in Survey held at Stockton-on-Tees Date, First Survey 31st May Last Survey 20th Oct. 1912
 Reg. Book. on the Steel Screw Steamer "Cabo Menor" (S.S. No 350) Tons Gross Net
 Master Built at Grangemouth By whom built Greenock Grangemouth & Co. When built 1912
 Engines made at Stockton By whom made Messrs Blair & Co Ltd (No 1758) when made 1912
 Boilers made at Stockton By whom made Messrs Blair & Co Ltd when made 1912
 Registered Horse Power Owners Port belonging to Seville
 Nom. Horse Power as per Section 28 188 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Tri-compound No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 19 1/2 - 32 1/2 - 52 1/2 Length of Stroke 36 Revs. per minute 65 Dia. of Screw shaft as per rule 11.38 Material of screw shaft as fitted 12 3/8 Ingot 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 in one 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 tight-fit If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4'-3"
 Dia. of Tunnel shaft as per rule 9.78 as fitted 10 Dia. of Crank shaft journals as per rule 10.28 as fitted 10 1/2 Dia. of Crank pin 11" Size of Crank webs 2 1/2 x 6 3/8 Dia. of thrust shaft under collars 11 Dia. of screw 14'-6" Pitch of Screw 16'-0" No. of Blades 4 State whether moveable no Total surface 63 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 26 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 26 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps Ballast = 9 x 10 Fuel = 4 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 3" In Holds, &c. 2 @ 2 3/4 each hold & tunnel well one @ 2 1/2
 No. of Bilge Injections 1 sizes 4 1/2 Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 4"
 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 fore hold How are they protected wood ceiling
 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 7.8.12* of Stern Tube 7.10.12 Screw shaft and Propeller 10.10.12
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Messrs John James & Sons David Colville & Sons
 Total Heating Surface of Boilers 3008 Is Forced Draft fitted no No. and Description of Boilers 2 single ended
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 15.7.12 No. of Certificate 4908
 Can each boiler be worked separately yes Area of fire grate in each boiler 35 1/2 sq ft No. and Description of Safety Valves to each boiler 2 direct spring Area of each valve 4.91 Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" External Mean dia. of boilers 13'-0" Length 10'-0" Material of shell plates steel
 Thickness 1 1/2 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 2-R. lap long. seams 2B-3 Riv Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 8" Lap of plates or width of butt straps 16 3/4 x 1
 Per centages of strength of longitudinal joint rivets 86.0 plate 85.9 Working pressure of shell by rules 184 Size of manhole in shell 16 x 12
 Size of compensating ring 7 1/2 x 1 1/2 No. and Description of Furnaces in each boiler 2 Morrison Material steel Outside diameter 45 3/8
 Length of plain part top bottom Thickness of plates crown bottom 9 1/8 Description of longitudinal joint weld No. of strengthening rings
 Working pressure of furnace by the rules 192 Combustion chamber plates: Material steel Thickness: Sides 1/8 Back 1/8 Top 1/8 Bottom 1 1/8
 Pitch of stays to ditto: Sides 9 1/8 x 9 1/8 Back 9 1/8 x 9 1/8 Top 10 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 185
 Material of stays steel Diameter at smallest part 1.99 Area supported by each stay 87.9 Working pressure by rules 204 End plates in steam space: Material steel Thickness 1 1/2 Pitch of stays 17 1/2 } 116 1/2 } 9 x 1 washers Working pressure by rules 184 Material of stays steel Diameter at smallest part 5.56 Area supported by each stay 270.5 Working pressure by rules 209 Material of Front plates at bottom steel
 Thickness 1 1/2 Material of Lower back plate steel Thickness 1 1/2 Greatest pitch of stays 14 1/4 } x 9 1/2 Working pressure of plate by rules 348
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/8 x 4 1/8 Material of tube plates steel Thickness: Front 1 1/2 Back 1 1/8 Mean pitch of stays 10 3/2
 Pitch across wide water spaces 14 1/2 Working pressures by rules 181 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7 1/8 x 1 3/4 Length as per rule 27 Distance apart 10 Number and pitch of stays in each 2 @ 8 3/4
 Working pressure by rules 192 Superheater or Steam chest; how connected to boiler none 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 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If 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

* Luth office



002978-002988-0042

VERTICAL DONKEY BOILER — *Manufacturers of Steel* *See Glasgow Report No. 31482*

No.	Description	When made	Where fixed
Made at	By whom made	No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Date of adjustment
Material of shell plates	Thickness	Range of tensile strength	Diap. of donkey boiler
Diap. of rivet holes	Whether punched or drilled	Pitch of rivets	Length
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	Diap. of stays
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
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 of con. rod top end, bottom end, and main bearing bolts and nuts; one set of coupling bolts and nuts; one set of feed and bilge pump valves; one set each H.P. & M.P. piston rings; one valve spindle; one propeller; assorted bolts & nuts and iron of various sizes*

The foregoing is a correct description,
For BAIRD & Co., Contract description,

Geo. H. Ketchum
 Manufacturer

Dates of Survey while building
 During progress of work in shops ---
 During erection on board vessel ---
 Total No. of visits

SECRETARY. 1912 May 21. June 3. 6. 10. 11. 12. 14. 15. 17. 19. 20. 21. 22. 24. 26. 27. 29. July 1. 5. 8. 11. 15. 22. 24. 29. Sept. 9.
 19. 7. 10. 15. 16. 21. 22. 23. 25.

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

Dates of Examination of principal parts—Cylinders 20.6.12 Slides 20.6.12 Covers 27.6.12 Pistons 26.6.12 Rods 27.6.12
 Connecting rods 27.6.12 Crank shaft 26.6.12 Thrust shaft 10.6.12 Tunnel shafts 29.7.12 Screw shaft 29.7.12 Propeller 22.7.12
 Stern tube 9.9.12 Steam pipes tested 15.10.12 Engine and boiler seatings 7.8.12 *Engines holding down bolts 10.10.12
 Completion of pumping arrangements 22.10.12 Boilers fixed 22.10.12 Engines tried under steam 22.10.12
 Main boiler safety valves adjusted 22.10.12 Thickness of adjusting washers Port Plr P-3/8 Star Plr P-3/8
 Material of Crank shaft *By steel* Identification Mark on Do. 6749 Material of Thrust shaft *By steel* Identification Mark on Do. 8885.N
 Material of Tunnel shafts *By steel* Identification Marks on Do. 8885.N Material of Screw shafts *By steel* Identification Marks on Do. 6749
 Material of Steam Pipes *Solid drawn copper (5 x 1/2 + 4 x 3/4)* Test pressure 400 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good. The boilers and main steam pipes were tested by hydraulic pressure and the engines and boilers examined under steam and all found satisfactory. The machinery is now in a good and safe working condition and eligible in my opinion to have the notation of LMC-10.12 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + LMC. 10.12.

JWR
 20/10/12

Wm Morrison
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee £ 2-0-0
 Special £ 28-4-0
 Donkey Boiler Fee £
 Travelling Expenses (if any) £ 10/6
 When applied for, 19.10.12
 When received, 7-11-12
 Rendered from the office 25/10/12

Committee's Minute FRI. NOV. 1-1912
 Assigned + L.M.C. 10.12



Certificate (if required) to be sent to the Registrar of Shipping.

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

If not, state whether, and when, one will be sent.

Is a Report also sent on the Hull of the Ship?

Certificate (if required) to be sent to the Registrar of Shipping.

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