

Port of Hull

Received at London Office JUES. 14 MAY 1907

No. in Survey held at Selby & Hull Date, first Survey Nov 27/06 Last Survey Apr 23rd 1907
Reg. Book. 784 on the Screw Steamer "Carlton" (Number of Visits 22) Tons { Gross 267
Net 124
Master Selby Built at Selby By whom built Cochrane & Sons When built 1907
Engines made at Hull By whom made Charles D. Holmes & Co. when made 1907
Boilers made at do By whom made do when made 1907
Registered Horse Power 68.8 Owners J. G. & F. Moss Port belonging to Grimsby
Nom. Horse Power as per Section 28 68.8 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 12½", 22", 35" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft 7.15" Material of screw shaft Iron
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 31"
Dia. of Tunnel shaft 6.4" Dia. of Crank shaft journals 6.7" Dia. of Crank pin 7" Size of Crank webs 13½" x 4½" Dia. of thrust shaft under collars 7" Dia. of screw 8.7½" Pitch of Screw 11.0" No. of Blades 4 State whether moveable No Total surface 28 sq. ft.
No. of Feed pumps 1 Diameter of ditto 2½" Stroke 24" Can one be overhauled while the other is at work yes
No. of Bilge pumps 1 Diameter of ditto 2½" Stroke 24" Can one be overhauled while the other is at work yes
No. of Donkey Engines One Sizes of Pumps 2½" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps Two 2" dia.
In Engine Room Two 2" dia. In Holds, &c. Two 2" dia.

Ejector suction from all bilges & discharge on deck.
No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 2½" ejector
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 Hold suction How are they protected Wood casing
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 5.12.06 of Stern Tube 5.12.06 Screw shaft and Propeller 5.12.06
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel The Steel Coy of Scotland Ltd.

Total Heating Surface of Boilers 11154 sq. ft. Is Forced Draft fitted No No. and Description of Boilers One S. E. cyl. Multitube
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15.3.07 No. of Certificate 1550
Can each boiler be worked separately yes Area of fire grate in each boiler 33 sq. ft. No. and Description of Safety Valves to each boiler Two spring Area of each valve 3.9" 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 6" Mean dia. of boilers 13'-0" Length 10'-0" Material of shell plates Steel
Thickness 1½" Range of tensile strength 28½ - 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR Lap
long. seams DR S. 5 Rivets Diameter of rivet holes in long. seams 1½" Pitch of rivets 7½" Lap of plates or width of butt straps 17½"
Per centages of strength of longitudinal joint rivets 85.25% Working pressure of shell by rules 190 lbs Size of manhole in shell 16" x 12"
Size of compensating ring 7" x 1½" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3'-7"
Length of plain part top 5'-8" bottom 5'-2" Thickness of plates crown 49" bottom 64" Description of longitudinal joint Welded No. of strengthening rings 1
Working pressure of furnace by the rules 187 Combustion chamber plates: Material Steel Thickness: Sides 13/16" Back 11/16" Top 13/16" Bottom 13/16"
Pitch of stays to ditto: Sides 9" x 10" Back 9½" x 8½" Top 8½" x 8½" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 204 lbs
Material of stays Steel Diameter at smallest part 1½" Area supported by each stay 90" Working pressure by rules 207 End plates in steam space: Material Steel Thickness 1½" Pitch of stays 17½" x 17½" How are stays secured on + w Working pressure by rules 185 lbs Material of stays Steel
Diameter at smallest part 6.2" Area supported by each stay 306" Working pressure by rules 202 Material of Front plates at bottom Steel
Thickness 29/32" Material of Lower back plate Steel Thickness 19/16" Greatest pitch of stays 19" Working pressure of plate by rules 180 lbs
Diameter of tubes 3¼" Pitch of tubes 5" x 4¾" Material of tube plates Steel Thickness: Front 29/32" Back 7/8" Mean pitch of stays 9¾"
Pitch across wide water spaces 15" Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1¾" Length as per rule 2'-8¾" Distance apart 8¾" Number and pitch of stays in each 3 @ 8½"
Working pressure by rules 206 lbs Superheater or Steam chest; how connected to boiler None 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
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
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: *Two top + two bottom-end connecting rod bolts + nuts. Two main bearing bolts + nuts. One set of coupling bolts + nuts. One set of feed + bilge pump valves. Main + donkey feed check valves. Assorted bolt + nuts re.*

The foregoing is a correct description,
 PER PRO CHARLES D. HOLMES & Co. *W. Allen* Manufacturer.

Dates of Survey while building	{	During progress of work in shops - -	<i>1906: - Nov 27 Dec 5. 6. 17. 1907: Jan 4. 15. 22. 30. Feb 5. 19. 28. Mar 12. 15. 20. Apr 5. 9.</i>
		During erection on board vessel - -	<i>Apr 13. 16. 17. 18. 20. 23.</i>
		Total No. of visits	<i>22</i>

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

Dates of Examination of principal parts—Cylinders		<i>5. 2. 07</i>	Slides	<i>20. 3. 07</i>	Covers	<i>5. 4. 07</i>	Pistons	<i>12. 3. 07</i>	Rods	<i>12. 3. 07</i>
Connecting rods		<i>12. 3. 07</i>	Crank shaft	<i>5. 4. 07</i>	Thrust shaft	<i>5. 4. 07</i>	Tunnel shafts	<i>✓</i>	Screw shaft	<i>23. 11. 06</i>
Stern tube		<i>23. 11. 06</i>	Steam pipes tested	<i>17. 4. 07</i>	Engine and boiler seatings	<i>5. 12. 06</i>	Engines holding down bolts	<i>13. 4. 07</i>		
Completion of pumping arrangements		<i>20. 4. 07</i>	Boilers fixed	<i>16. 4. 07</i>	Engines tried under steam		<i>20. 4. 07</i>			
Main boiler safety valves adjusted		<i>20. 4. 07</i>	Thickness of adjusting washers	<i>F 1/4" A 5/16"</i>						
Material of Crank shaft		<i>Iron</i>	Identification Mark on Do.	<i>301 J.K.</i>	Material of Thrust shaft	<i>Iron</i>	Identification Mark on Do.	<i>5. 4. 07</i>		
Material of Tunnel shafts		<i>✓</i>	Identification Marks on Do.	<i>✓</i>	Material of Screw shafts	<i>Iron</i>	Identification Marks on Do.	<i>23. 11. 06</i>		
Material of Steam Pipes		<i>Solid drawn copper</i>		Test pressure	<i>360 lbs</i>					

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

The Engines and Boiler of this vessel have been constructed under Special Survey, are of good material and workmanship, and have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of +LMC 4.07 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 4.07

APR 14/5707

The amount of Entry Fee..	£	:	When applied for.	
Special	£	10 7	13/57	1907
Donkey Boiler Fee	£	:	When received.	
Travelling Expenses (if any)	£	8 2	31/5707	1907

Committee's Minute *FRI. 17 MAY 1907*

Assigned *+LMC 4.07*

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

MACHINERY CERTIFICATE WRITTEN.

