

## REPORT ON MACHINERY.

No. 69907

Date of writing Report 31 May 1907 When handed in at Local Office 10 Port of London Received at London Office 5/6/07 17 JUN 1907

No. in Survey held at Luton Date, First Survey Feb 04 Last Survey May 29 1907  
Reg. Book. 13/14 on the Engines 8° 1672 for S.S. City of Liverpool (Number of Visits 11) Hull. 13/16/07

Master                      Built at Selby By whom built Cochrane Sons Tons { Gross 88  
Net 14  
When built 1904

Engines made at Luton By whom made The Vauxhall & West Hydraulic Eng Co when made 1904  
Boilers made at Newcastle By whom made Riley Bros & Stephenson when made 1904

Registered Horse Power                      Owners London & North S.F. Co Ltd Port belonging to Peterhead  
Nom. Horse Power as per Section 28 35.34 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Imp. Invert. Surface Condensing No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 11" - 24" Length of Stroke 16" Revs. per minute 150 Dia. of Screw shaft 5.367" Material of Steel  
as fitted 5 1/2" screw shaft

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 ✓ 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 1' - 10"

Dia. of Tunnel shaft 4.71" Dia. of Crank shaft journals 4.94" Dia. of Crank pin 5 1/4" Size of Crank webs 3 1/2" x 2 1/2" Dia. of thrust shaft under  
collars 5 1/4" Dia. of screw 6 - 0" Pitch of Screw 7' - 9" No. of Blades 4 State whether moveable No Total surface 16.5 sq ft

No. of Feed pumps one Diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work ✓  
No. of Bilge pumps one Diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work ✓

No. of Donkey Engines 1 Sizes of Pumps 6" Steam Cyl. 2 1/2" feed pump x 6" Stroke No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room three 2" one 2 1/2" 3" water pump In Holds, &c. One 2"

No. of Bilge Injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump pump 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 awash

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 26.4.07 of Stern Tube 26.4.07 Screw shaft and Propeller 26.4.07  
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from                     

BOILERS, &c.—(Letter for record                     ) Manufacturers of Steel                     

Total Heating Surface of Boilers 720 sq ft Is Forced Draft fitted                      No. and Description of Boilers See separate Report  
Working Pressure 140 lb. Tested by hydraulic pressure to                      Date of test                      No. of Certificate                     

Can each boiler be worked separately                      Area of fire grate in each boiler                      No. and Description of Safety Valves to  
each boiler                      Area of each valve                      Pressure to which they are adjusted                      Are they fitted with easing gear                     

Smallest distance between boilers or uptakes and bunkers or woodwork                      Mean dia. of boilers                      Length                      Material of shell plates                       
Thickness                      Range of tensile strength                      Are the shell plates welded or flanged                      Descrip. of riveting: cir. seams                     

long. seams                      Diameter of rivet holes in long. seams                      Pitch of rivets                      Lap of plates or width of butt straps                       
Per centages of strength of longitudinal joint                      Working pressure of shell by rules                      Size of manhole in shell                     

Size of compensating ring                      No. and Description of Furnaces in each boiler                      Material                      Outside diameter                       
Length of plain part                      Thickness of plates                      Description of longitudinal joint                      No. of strengthening rings                     

Working pressure of furnace by the rules                      Combustion chamber plates: Material                      Thickness: Sides                      Back                      Top                      Bottom                       
Pitch of stays to ditto: Sides                      Back                      Top                      If stays are fitted with nuts or riveted heads                      Working pressure by rules                     

Material of stays                      Diameter at smallest part                      Area supported by each stay                      Working pressure by rules                      End plates in steam space:                       
Material                      Thickness                      Pitch of stays                      How are stays secured                      Working pressure by rules                      Material of stays                     

Diameter at smallest part                      Area supported by each stay                      Working pressure by rules                      Material of Front plates at bottom                       
Thickness                      Material of Lower back plate                      Thickness                      Greatest pitch of stays                      Working pressure of plate by rules                     

Diameter of tubes                      Pitch of tubes                      Material of tube plates                      Thickness: Front                      Back                      Mean pitch of stays                       
Pitch across wide water spaces                      Working pressures by rules                      Girders to Chamber tops: Material                      Depth and  
thickness of girder at centre                      Length as per rule                      Distance apart                      Number and pitch of stays in each                     

Working pressure by rules                      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  
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



# 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:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air circulating feed and bilge pump valves, and a quantity of assorted bolts nuts etc.  
 The foregoing is a correct description,

Manufacturer.

*Am. Class*

Dates of Survey while building { During progress of work in shops - - 1907 Feb 4 Mar 13 20 Apr 5 16 26 30 May 7 14 29  
 { During erection on board vessel - - 1907 Apr 11 19 26 May 7 23 28 30 31 Jun 6 10 13  
 Total No. of visits 11 + 11 = 22  
 Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—Cylinders 23.5.07 Slides 23.5.07 Covers 23.5.07 Pistons 17.5.07 Rods 17.5.07  
 Connecting rods 17.5.07 Crank shaft 16.4.07 Thrust shaft ☒ Tunnel shafts 16.4.07 Screw shaft 5.4.07 Propeller 5.4.07  
 Stern tube 13.3.07 Steam pipes tested 25.5.04 Engine and boiler seatings 8.5.04 Engines holding down bolts 13.6.04  
 Completion of pumping arrangements 13.6.04 Boilers fixed 10.6.07 Engines tried under steam 10.6.07  
 Main boiler safety valves adjusted 10.6.04 Thickness of adjusting washers 9/32" & 5/16"

Material of Crank shaft *Steel* Identification Mark on Do. *205* Material of Thrust shaft ☒ Identification Mark on Do. ☒  
 Material of Tunnel shafts *Steel* Identification Marks on Do. *90486* Material of Screw shafts *Steel* Identification Marks on Do. *90489*  
 Material of Steam Pipes *Solid drawn copper* Test pressure 280 lbs per sq. inch.

General Remarks (State quality of workmanship, opinions as to class, &c.) *These Engines have been constructed under special survey, the material has been tested & the workmanship is good, they have been sent to Selby for the purpose of fitting on board.*

*These engines have been fitted on board, tested under steam, and found satisfactory, and are now in good order, and safe working condition and respectfully submitted as being eligible in my opinion to have the notation of *L.M.C. 6.6.07* in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD.

*James Barclay*  
 14 6 07

*J.R.R.* 17/6/07

The amount of Entry Fee... £ 1 : 0 : 0 When applied for, 4/7/1907  
 Special ... £ 8 : 2 : 0  
 Donkey Boiler Fee (Hull) £ 2 : 18 : 8  
 Travelling Expenses (if any) £ 1 : 17 : 6  
 When received, 13/6/1907

*Thomas A. Blackie*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

*+ L.M.C. 6.07*

MACHINERY CERTIFICATE WRITTEN.



© 2021

Lloyd's Register Foundation

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.