

REPORT ON MACHINERY.

Port of London

No. in Survey held at
Reg. Book.

280 on the ✓

London

Received at London Office THURS. 5 MAY 1892

Date, first Survey Nov. 23rd 1891 Last Survey April 23rd 1892

(Number of Visits 8)

Steamer "Rio Tejo"

Master Built at Newcastle By whom built Benbridge

Engines made at London By whom made J. Stewart when made 1872

Boilers made at As: By whom made do: when made 1883

Registered Horse Power 80 Owners Companhia Thelis Port belonging to Oporto

Nom. Horse Power as per Section 28

ENGINES, &c.—	Description of Engines	No. of Cylinders
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Diameter of Cylinders	Length of Stroke	Revolutions per minute	Diameter of Screw shaft as per rule
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Diameter of Tunnel shaft as per rule as fitted	Diameter of Crank shaft journals	Diameter of Crank pin	Size of Crank webs
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Diameter of screw	Pitch of screw	No. of blades	State whether moveable	Total surface
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No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work		
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No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work		
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No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps			
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In Engine Room	In Holds, &c.				
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No. of bilge injections sizes	Connected to condenser, or to circulating pump	Is a separate donkey suction fitted in Engine room & size			
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Are all the bilge suction pipes fitted with roses	Are the roses in Engine room always accessible	Are the sluices on Engine room bulkheads always accessible			
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Are all connections with the sea direct on the skin of the ship	Are they Valves or Cocks				
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Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates	Are the discharge pipes above or below the deep water line				
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Are they each fitted with a discharge valve always accessible on the plating of the vessel	Are the blow off cocks fitted with a spigot and brass covering plate				
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What pipes are carried through the bunkers	How are they protected				
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Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times					
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Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges					
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When were stern tube, propeller, screw shaft, and all connections examined in dry dock	Is the screw shaft tunnel watertight				
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Is it fitted with a watertight door	worked from				
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OILERS, &c.—	(Letter for record	Total Heating Surface of Boilers
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No. and Description of Boilers	Two Cylindrical & multitubular	Working Pressure 85 lbs per sq in	Tested by hydraulic pressure to 170 lbs
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Date of test 12-2-92	Can each boiler be worked separately	Area of fire grate in each boiler 30 sq ft	No. and Description of safety valves to
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each boiler	Double spring	Area of each valve 9.6 sq in	Pressure to which they are adjusted 85 lbs per sq in
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with easing gear	Yards	Smallest distance between boilers or uptakes and bunkers or woodwork 12 inches	Mean diameter of boilers 9' 0"
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Length 9' 6"	Material of shell plates Steel	Thickness 9/16	Description of riveting: circum. seams Single rivet long. seams Double cap
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Diameter of rivet holes in long. seams 15/16	Pitch of rivets 80% ^{rivets}	3 15/16	Lap of plates or width of butt straps 6 1/2 "
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Percentages of strength of longitudinal joint plate 77.7	Working pressure of shell by rules 85 lbs	Size of manhole in shell 14" R 11"
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Size of compensating ring 1/2" heels	No. and Description of Furnaces in each boiler Two	Material Iron	Outside diameter 35 7/8"
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Length of plain part top 6 1/2" bottom 6 1/2"	Thickness of plates crown 7/16 bottom 7/16	Description of longitudinal joint double butt	No. of strengthening rings 2
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Working pressure of furnace by the rules 97 lbs	Combustion chamber plates: Material Iron	Thickness: Sides 7/16 Back 7/16	Top 1/2 Bottom 7/16
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Pitch of stays to ditto: Sides 7 7/8 Back 8 x 7 7/8 op 8 x 8 1/2" stays are fitted with nuts or riveted heads nuts	Working pressure by rules 85 lbs
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Material of stays Steel	Diameter at smallest part 15/16	Area supported by each stay 630"	Working pressure by rules 85 lbs	End plates in steam space
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Material Steel	Thickness 9/16	Pitch of stays 14 x 14"	How are stays secured nut & washer	Working pressure by rules 85 lbs	Material of stays Steel
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Diameter at smallest part 19/16	Area supported by each stay 1960"	Working pressure by rules 91	Material of Front plates at bottom Steel
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Thickness 1/2	Material of Lower back plate Steel	Thickness 1/2	Greatest pitch of stays 1/2"	Working pressure of plate by rules 85 lbs
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Diameter of tubes 3"	Pitch of tubes 4 1/4 x 4 1/4	Material of tube plates Steel	Thickness: Front 9/16 Back 5/8	Mean pitch of stays 10 1/2"
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Pitch across wide water spaces 10 1/2"	Working pressures by rules plate double borders to Chamber tops: Material Steel	Depth and thickness of girder at centre 6 1/2" x 9/16	Length as per rule 25 3/4" Distance apart 8 1/2"	Number and pitch of Stays in each 2 - 8"
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Working pressure by rules 100 lbs	Superheater or Steam chest; how connected to boiler	Can the superheater be shut off and the boiler worked separately ✓	Diameter 4' 0" Length 5' 0" Thickness of shell plates 3/8"	Material Steel Description of longitudinal joint 1/2" cap Diam. of rivet holes 13/16 Pitch of rivets 2 9/16 Working pressure of shell by rules 120
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If stiffened with rings	Distance between rings	Working pressure by rules	End plates: Thickness	Material of flue plates ✓ Thickness 20 19
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Working pressure of end plates	Area of safety valves to superheater	Are they fitted with easing gear	How stayed
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53015 L

DONKEY BOILER— Description

Made at	By whom made	When made	Where fixed	
Working pressure	tested by hydraulic pressure to	No. of Certificate	Fire grate area	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
Lap of plating	Per centage of strength of joint	Rivets Plates	Thickness of shell crown plates	Radius of do.
Dia. of stays.	Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
joint	Thickness of furnace crown plates	Stayed by		Working pressure of shell by rules
Working pressure of furnace by rules		Diameter of uptake	Thickness of uptake plates	Thickness of water tubes

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

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

These boilers are of good quality, steel, and workmanship and have been built under special survey.

The vessel is eligible in my opinion to have + N.B. 4-92 recorded in the register book.

Certificate (if required) to be sent to

The amount of Entry Fee.. . £	:	When applied for,
Special .. . £	4 : 10 :	13 5 10 AM
Donkey Boiler Fee .. . £	:	When received,
Travelling Expenses (if any) £	:	13 5 10 AM

H.P. Cornish

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

Committee's Minute

TUES. 17 MAY 1892

TUES. 23 AUG 1892

Assigned



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Foundation