

# REPORT ON MACHINERY.

26204

Port of Newcastle Received at London Office 21 AUG 91  
 No. 26204 No. in Survey held at Newcastle Date, first Survey 5 Dec 90 Last Survey 5 Aug 1891  
 Reg. Book. Newcastle (Number of Visits 20) 5580  
 on the S.S. Francesco Crispi Tons 1652  
 Master Caffaro Built at Newcastle By whom built Palmer Scott & Co When built 1891  
 Engines made at Newcastle By whom made Palmer Scott & Co when made 1891  
 Boilers made at Newcastle By whom made do do when made 1891  
 Registered Horse Power 400 Owners Italy Port belonging to Rapoli

## ENGINES, &c.

Description of Engines Triple expansion in three cranks  
 Diameter of Cylinders 28-45-74 Length of Stroke 48 No. of Rev. per minute 70 Point of Cut off, High Pressure .72 Low Pressure .66  
 Diameter of Screw shaft 13 3/4 Diam. of Tunnel shaft 13 1/4 Diam. of Crank shaft journals 14 Diam. of Crank pin 14 size of Crank webs 9 1/2 x 18 1/2  
 Diameter of screw 16-9 Pitch of screw 20-6 No. of blades four state whether moveable no total surface 75 sq ft  
 No. of Feed pumps two diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work no  
 No. of Bilge pumps two diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work no  
 Where do they pump from all bilges, holds & well  
 No. of Donkey Engines Three Size of Pumps 11 x 11 x 12 7 1/2 x 4 1/2 x 10 Where do they pump from Ballast, all tanks, holds  
bilge well separate bilge feed holds with bilges & holdwell. Land pump from bilge well  
 Are all the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes  
 No. of bilge injections one and sizes 6 1/2 Are they connected to condenser or to circulating pump no  
 How are the pumps worked levers over condenser from after engine  
 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 main steam How are they protected wrought iron tubes  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform

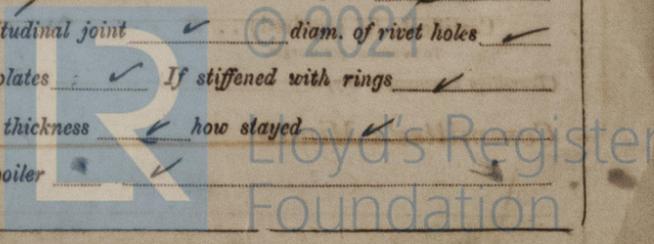
## BOILERS, &c.

Number of Boilers Four Description Cyl. Superheater Whether Steel or Iron Steel  
 Working Pressure 160 lb Tested by hydraulic pressure to 320 lb Date of test May 27 1891 3593  
 Description of superheating apparatus or steam chest none  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately yes  
 No. of square feet of fire grate surface in each boiler 59.69 Description of safety valves spring No. to each boiler two  
 Area of each valve 7.070 Are they fitted with easing gear yes No. of safety valves to superheater yes area of each valve yes  
 Are they fitted with easing gear yes Smallest distance between boilers and bunkers or woodwork 2 feet Diameter of boilers 14.6  
 Length of boilers 10.6 description of riveting of shell long. seams d + b circum. seams d + b lap Thickness of shell plates 1 3/32  
 Diameter of rivet holes 15/16 whether punched or drilled d pitch of rivets 8 1/2 Lap of plating 19 x 1 1/16  
 Per centage of strength of longitudinal joint 84.5 working pressure of shell by rules 161 size of manholes in shell 16 x 12  
 Size of compensating rings yes No. of Furnaces in each boiler Three  
 Outside diameter 44 length, top 7 1/2 bottom yes thickness of plates 9/16 description of joint yes if rings are fitted yes  
 Greatest length between rings yes working pressure of furnace by the rules 157 combustion chamber plating, thickness, sides 9/16 back 9/16 top 9/16  
 Pitch of stays to ditto, sides 7 3/4 back 7 3/4 top 2 1/2 If stays are fitted with nuts or riveted heads yes working pressure of plating by rules 162 Diameter of stays at smallest part 1 1/4 working pressure of ditto by rules 163 end plates in steam space, thickness 15/16  
 Pitch of stays to ditto 19 x 16 how stays are secured d + b working pressure by rules 160 diameter of stays at smallest part 3 5/8 working pressure by rules 160 Front plates at bottom, thickness 3/4 Back plates, thickness 15/16  
 Greatest pitch of stays 18 working pressure by rules 160 Diameter of tubes 3 1/2 pitch of tubes 4 3/4 thickness of tube plates, front 7/8 back 7/8 how stayed tubes pitch of stays as plain width of water spaces 6  
 Diameter of Superheater or Steam chest yes length yes thickness of plates 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 thickness of plates yes If stiffened with rings yes  
 Distance between rings yes working pressure by rules yes end plates of superheater, or steam chest; thickness yes how stayed yes  
 Superheater or steam chest; how connected to boiler yes

Report received 21 Aug 1891

Description of furnaces 702

NWC821-0185



REPORT ON MACHINERY.

**DONKEY BOILER**— Description *Cyl. Simple with shell*  
 Made at *Stockton* by whom made *Ludlow & Co* when made *1884* where fixed *on deck*  
 Working pressure *90* tested by hydraulic pressure to *180* No. of Certificate *748* fire grate area *27.5 sq* description of safety valves *spray*  
 No. of safety valves *two* area of each *5.94 sq* if fitted with easing gear *7/8* if steam from main boiler.  
 enter the donkey boiler *no* diameter of donkey boiler *9.0* length *9.0* description of riveting *d b o d*  
 Thickness of shell plates *9/16* diameter of rivet holes *13/16* whether punched or drilled *no* pitch of rivets *3 1/2* lap of plating *-*  
 per centage of strength of joint *76.7* thickness of crown plates *3/32* stayed by *17/8 stays 13 x 13*  
 Diameter of furnace, top *2 1/10* bottom *-* length of furnace *6.0* thickness of plates *15/32* description of joint *abs*  
 Thickness of furnace crown plates *7/16* stayed by *1 1/8 stays 7 1/2 x 7 1/2* working pressure of shell by rules *92*  
 Working pressure of furnace by rules *102* diameter of tubes *3* thickness of plates *9/16 + 5/8* thickness of water tubes *-*

**SPARE GEAR.** State the articles supplied: *3 cyl covers, 1 piston rod, crank shaft, bolts on piston spring, pair crank pins, air pump rod, erg pump rod feed pump, 2 each up end bottom end main bearing bolts, 12 emptying bolts, screw shaft, 2 blades, eccentric sheave & strap, spare drill & ord engine room outfit.*

The foregoing is a correct description,  
*J. M. Reed* Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been constructed under special survey the materials and workmanship are sound and good and slight in my opinion to be classed + L.M.C. 8.91 in the Society's Register.*

Heating surface *7570*  
 H.P. *438*

*W. J. Reed*

*It is submitted that this vessel is eligible to have + L.M.C. 8.91 recorded.*

*J. M. Reed*  
 22.8.91

The amount of Entry Fee .. £ *3* : . . . received by me,  
 Special .. .. £ *14* : *18* : . .  
 Donkey Boiler Fee .. .. £ *1* : . . .  
 Certificate (if required) .. £ *10* : *9* : *18* 91  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ . . .)

Committee's Minute *TUES. 25 AUG 1891*  
*+ L.M.C. 8.91*

*J. M. Reed*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

