

# REPORT ON MACHINERY.

8804

No. 8804

Port of *Glasgow*

3 OCT 1888

No. in Survey held at *Glasgow & Dumbarton* Date, first Survey *19<sup>th</sup> May 1888* Last Survey *Oct 3<sup>rd</sup> 1888*

Reg. Book. on the *S.S. "Conquistador"* (Number of Visits *22*) Tons *1342*

Master *Francisco Nines* Built at *Dumbarton* By whom built *A. McMillan & son* When built *1858*

Engines made at *Glasgow* By whom made *David Rowan & son* when made *1888*

Boilers made at " By whom made " when made *1888*

Registered Horse Power *103* Owners *Perey, McEernanos & Maycas* Port belonging to *Valencia*

Engines, &c. — Description of Engines *Triple Expansion (3 Cranks)*

Diameter of Cylinders *18" 34" 45"* Length of Stroke *36"* No. of Rev. per minute *86* Point of Cut off, High Pressure *Variable* Low Pressure *Variable*

Diameter of Screw shaft *9"* Diam. of Tunnel shaft *8 3/8"* Diam. of Crank shaft journals *9"* Diam. of Crank pin *9 1/4"* size of Crank webs *6 3/8" x 10 1/2"*

Diameter of screw *12.6"* Pitch of screw *14 1/2"* No. of blades *4* state whether moveable *Solid* surface *40 ft*

No. of Feed pumps *2* diameter of ditto *2 3/4"* Stroke *18"* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *2* diameter of ditto *2 3/4"* Stroke *18"* Can one be overhauled while the other is at work *Yes*

Where do they pump from *All Compartments*

No. of Donkey Engine *Two* Size of Pumps *7" 7/4" x 8" stroke* Where do they pump from *Sea Bilge Hotwell*

Bilge Suction Pipes 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 *1 3/4"* Are they connected to condenser, or to circulating pump *Circulating pump*

How are the pumps worked *By Levers*

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 *Below*

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 *Bilge pipes to Lockhold* How are they protected *Wood casing*

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 *On ship before being launched*

Is the screw shaft tunnel watertight *Yes* and fitted with a sluice door *Yes* worked from *Upper Deck*

BOILERS, &c. — Number of Boilers *Two* Description *Round Horizontal* Whether Steel or Iron *Steel*

Working Pressure *150 lbs* Tested by hydraulic pressure to *300 lbs* Date of test *11<sup>th</sup> Sept. 1888*

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 *38 ft* Description of safety valves *Direct Spring* No. to each boiler *Two*

Area of each valve *6"* Are they fitted with easing gear *Yes* No. of safety valves to superheater *—* area of each valve *—*

Are they fitted with easing gear *—* Smallest distance between boilers and bunkers or woodwork *about 12"* Diameter of boilers *11 1/2"*

Length of boilers *9 1/2"* description of riveting of shell long. seams *Double riveted* circum. seams *Double riveted* Thickness of shell plates *3 1/32"*

Diameter of rivet holes *1 3/16"* whether punched or drilled *Drilled* pitch of rivets *6 1/4" x 3 1/8"* Lap of plating *Straps 18" x 10 1/16"*

Percentage of strength of longitudinal joint *80%* working pressure of shell by rules *152 lbs* size of manholes in shell *16" x 12"*

Size of compensating rings *Doubling plates 2" x 4" x 3 1/32"* No. of Furnaces in each boiler *Two*

Outside diameter *3' 4"* length, top *6' 9"* bottom *9' 1/2"* thickness of plates *1 1/32"* description of joint *Corrugated* if rings are fitted *—*

Greatest length between rings *—* working pressure of furnace by the rules *162 lbs* combustion chamber plating, thickness, sides *1 1/32"* back *9/16"* top *9/16"*

Pitch of stays to ditto, sides *7/2" x 7/4"* back *7/2" x 7/4"* top *7" x 4"* If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *154 lbs*

diameter of stays at smallest part *1 3/8" = 1.23"* working pressure of ditto by rules *146 lbs* plates in steam space, thickness *14/16"*

Pitch of stays to ditto *14" x 10"* how stays are secured *By double nuts* working pressure by rules *150 lbs* diameter of stays at smallest part *2 1/2" = 3.64"* working pressure by rules *156 lbs*

Front plates at bottom, thickness *1 1/16"* Back plates, thickness *1 3/16"*

Greatest pitch of stays *1 1/2" x 7 1/2"* working pressure by rules *—* Diameter of tubes *3 1/2"* pitch of tubes *4 3/4" x 4 3/4"* thickness of tube plates, front *14/16"* back *13/16"* how stayed *By tubes* pitch of stays *9 1/2" x 9 1/2"* width of water spaces *6"*

Diameter of Superheater or Steam chest *—* length *—* thickness of plates *—* description of longitudinal joint *—* diam. of rivet holes *—*

Pitch of rivets *—* working pressure of shell by rules *—* diameter of flue *—* thickness of plates *—* If stiffened with rings *—*

Distance between rings *—* working pressure by rules *—* end plates of superheater, or steam chest; thickness *—* how stayed *—*

Superheater or steam chest; how connected to boiler *—*

Form 2

Lloyd's Register Foundation

GLS156-0209

8804 reg.

**DONKEY BOILER**— Description *1 Round Vertical (3 cross tubes)*  
 Made at *Glasgow* by whom made *David Rowan & Sons* when made *1888* where fixed *In Strathfield*  
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *2058* fire grate area *21.64* description of safety valves *Direct Spring* No. of safety valves *Two* area of each *5"* if fitted with easing gear *Yes* if steam from main boilers can enter the donkey boiler *No* diameter of donkey boiler *6 ft 2"* length *12 ft* description of riveting *Double & single riveted*  
 Thickness of shell plates *3/16"* diameter of rivet holes *7/8"* whether punched or drilled *Drilled* pitch of rivets *3"* lap of plating *4 1/2"*  
 per centage of strength of joint *73%* thickness of crown plates *3/16"* stayed by *Uptake & six stays 2 1/2" dia*  
 Diameter of furnace, top *4' 10"* bottom *5' 3"* length of furnace *6' 5"* thickness of plates *3/16"* description of joint *Lap single riveted*  
 Thickness of furnace crown plates *3/16"* stayed by *As above* working pressure of shell by rules *84 lbs*  
 Working pressure of furnace by rules *80 lbs* *Fire box fitted with 2 rows of screw stays* diameter of uptake *15"* thickness of plates *3/16" iron* thickness of water tubes *3/16"*

SPARE GEAR. State the articles supplied:— *2 Connecting rod bolts for top & bottom ends*  
*2 main bearing bolts, 1 set Coupling bolts, valves with seats for feed and*  
*bilge pumps, assortment of bolts, nuts Springs etc. 1 Propeller,*  
*1/2 set furnace bars for main boiler, 1/2 set furnace bars for Donkey Boiler,*  
 The foregoing is a correct description,  
 Manufacturer. *David Rowan & Sons*

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines and boilers*  
*are of good workmanship and materials and are now*  
*good order and safe working condition and eligible in*  
*my opinion to be noted in the Register, Book + Lloyd's M.*  
*10/88*

*It is submitted that this*  
*matter is eligible to have*  
*+ LMC 10.88 recorded.*

*Ad. by*  
*4.19.88*

*[Large blue signature]*

The amount of Entry Fee . . . £ *2* : *0* : *0* received by me,  
 Special . . . . . £ *15* : *9* : *0*  
 Donkey Boiler Fee . . . . . £ *0* : *0* : *0*  
 Certificate (if required) . . . . . £ *0* : *0* : *0* *2/10/1888*  
 (To be sent as per margin.)  
 (Travelling Expenses, if any, £ . . . . .)

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

Committee's Minute *FRIDAY 5 OCT 1888*

*+ LMC 10.88*

