

# REPORT ON MACHINERY.

5490  
 No. in Survey held at *Leith* Date, first Survey *8<sup>th</sup> June* Last Survey *27<sup>th</sup> Aug 1887*  
 Book. *Florida* (Number of Vists *19*) Tons *10.92*  
 on the *Steel Screw Steam Yacht* When built *1887*  
 Built at *Leith* By whom built *John Cran & Co*  
 By whom made *Heraults* when made *1887*  
 By whom made *John Cran & Co* when made *1887*  
 Registered Horse Power *17* Owners *J.A. Waller* Port belonging to *London*

GINES, &c.—  
 Description of Engines *Compound, Surface condenser, direct acting, inverted cycle*  
 Diameter of Cylinders *10 & 20* Length of Stroke *15* No. of Rev. per minute *140* Point of Cut off, High Pressure *6* Low Pressure *5*  
 Diameter of Screw shaft *4* Diam. of Tunnel shaft *4* Diam. of Crank shaft journals *4* Diam. of Crank pin *4* size of Crank webs *5 x 2 5/8*  
 Diameter of screw *5 1/2* Pitch of screw *8 1/2* No. of blades *three* state whether moveable *no* total surface *7.5 ft<sup>2</sup>*  
 of Feed pumps *One* diameter of ditto *1* Stroke *15* Can *one* be overhauled while the other is at work *yes*  
 of Bilge pumps *One* diameter of ditto *1* Stroke *15* Can *one* be overhauled while the other is at work *yes*  
 Where do they pump from *Engine room bilges & holds*  
 of Donkey Engines *One* Size of Pumps *4 x 6 x 1 3/4* Where do they pump from *Sea, hot well, & bilges*

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*  
 of bilge injections *—* and sizes *—* Are they connected to condenser, or to circulating pump *—*  
 How are the pumps worked *Direct from crossheads*  
 Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Cocks*  
 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  
 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*  
 That pipes are carried through the bunkers *none* How are they protected *—*  
 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 *while building*  
 Is the screw shaft tunnel watertight *—* and fitted with a sluice door *—* worked from *—*

BOILERS, &c.—  
 Number of Boilers *One* Description *Cyl. multitubular* Whether Steel or Iron *Steel (S)*  
 Working Pressure *90 lbs* Tested by hydraulic pressure to *180 lbs* Date of test *6/8/87*  
 Description of superheating apparatus or steam chest *None*  
 Can each boiler be worked separately *—* Can the superheater be shut off and the boiler worked separately *—*  
 Area of square feet of fire grate surface in each boiler *13.5 ft<sup>2</sup>* Description of safety valves *Spring* No. to each boiler *one*  
 Area of each valve *7.07"* 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 *6"* Diameter of boilers *6'-10"*  
 Length of boilers *7'-0"* description of riveting of shell long. seams *Lap treble* circum. seams *Lap single* Thickness of shell plates *7/16*  
 Diameter of rivet holes *7/8* whether punched or drilled *D.* pitch of rivets *1 1/2 x 2 1/4* Lap of plating *6 1/2*  
 Percentage of strength of longitudinal joint *79%* working pressure of shell by rules *146* size of manholes in shell *15" x 11 1/2"*  
 Size of compensating rings *6 1/4 x 1/2* No. of Furnaces in each boiler *One*  
 Outside diameter *2'-11"* length, top *4'-6"* bottom *6'-1"* thickness of plates *3/32* description of joint *Lap, riv.* if rings are fitted *—*  
 Greatest length between rings *—* working pressure of furnace by the rules *95* combustion chamber plating, thickness, sides *7/16* back *3/32* top *1/32*  
 Pitch of stays to ditto, sides *8 5/8* back *8 5/8* top *8 5/8* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *90*  
 Diameter of stays at smallest part *1 1/4* working pressure of ditto by rules *5260* end plates in steam space, thickness *3/4*  
 Pitch of stays to ditto *1'-2 7/8* how stays are secured *double nuts* working pressure by rules *90 lbs* diameter of stays at smallest part *1 7/8*  
 working pressure by rules *—* Front plates at bottom, thickness *9/16* Back plates, thickness *9/16*  
 Greatest pitch of stays *as per rule* working pressure by rules *—* Diameter of tubes *2 3/4* pitch of tubes *4* thickness of tube plates, front *9/16* back *9/16* how stayed *Stay tubes* pitch of stays *8* width of water spaces *1 1/4*  
 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 *—*



**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 \_\_\_\_\_ if fitted with easing gear \_\_\_\_\_ if steam from main boilers  
 enter the donkey boiler \_\_\_\_\_ diameter of donkey boiler \_\_\_\_\_ length \_\_\_\_\_ description of riveting \_\_\_\_\_  
 Thickness of shell plates \_\_\_\_\_ diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ lap of plating \_\_\_\_\_  
 per centage of strength of joint \_\_\_\_\_ thickness of crown plates \_\_\_\_\_ stayed by \_\_\_\_\_  
 Diameter of furnace, top \_\_\_\_\_ bottom \_\_\_\_\_ length of furnace \_\_\_\_\_ thickness of plates \_\_\_\_\_ description of 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 plates \_\_\_\_\_ thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied :—

The foregoing is a correct description,

*John Bram* Manufacturer.

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

*The machinery of this vessel has been built under special survey.  
 workman ship materials good.*

*The approve tracing & test certificate is sent herewith.*

*The safety valve has been set under steam to a working pressure of 9 lbs per  
 square inch.*

*The machinery of this vessel is now in good working order & safe  
 in my opinion, to be classed and marked L.M.C. 8-87.*

The amount of Entry Fee .. £ 1 : : received by me, *at L.L.*  
 Special .. £ 7 : :  
 Donkey Boiler Fee .. £ 7 : :  
 Certificate (if required) .. £ *Gratis* : : *13/9/1887*  
 To be sent as per margin.

(Travelling Expenses, if any, £ ..)

Committee's Minute

**FRIDAY 2 SEPT 1887**

*Submitted the 11th Sept 87*  
*X L.M.C. 8-87*  
*11.9.87*  
*W. J. Darling*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.