

REPORT ON MACHINERY. 5715

Port of *Dundee & Ainsturth*
 No. in Survey held at *Dundee & Ainsturth* Date, first Survey *10th March* Last Survey *4th Aug 1888*
 Reg. Book. *Wood Screw Steamer Barbaras* (Number of Visits *2*) Tons *93.42*
 Master *W. Gibson* Built at *Ainsturth* By whom built *W. Jarvis* When built *1885*
 Engines made at *Glasgow* By whom made *King & Co.* when made *1886*
 Boilers made at *Glasgow* By whom made *King & Co.* when made *1886*
 Registered Horse Power *20* Owners *W. Jarvis* Port belonging to *Kirkcaldy*

ENGINES, &c.—

Description of Engines *Tandem compound 4 cylinders*
 Diameter of Cylinders *7 1/2 x 11* Length of Stroke *12* No. of Rev. per minute *3/4* Point of Cut off, High Pressure *3/4* Low Pressure *3/4*
 Diameter of Screw shaft *3 7/8* Diam. of Tunnel shaft *✓* Diam. of Crank shaft journals *4 1/2* Diam. of Crank pin *3 1/2* size of Crank webs *2 7/8 x 4 1/2*
 Diameter of screw *5' 8"* Pitch of screw *9' 6"* No. of blades *3* state whether moreable *✓* total surface *✓*
 No. of Feed pumps *One* diameter of ditto *1 1/16* Stroke *12* Can one be overhauled while the other is at work *✓*
 No. of Bilge pumps *One* diameter of ditto *✓* Stroke *✓* Can one be overhauled while the other is at work *✓*
 Where do they pump from *Engine Room*
 No. of Donkey Engines *One* Size of Pumps *6 x 6 x 2 3/8* Where do they pump from *Engine Room*

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 *✓*
 No. of bilge injections *None* and sizes *✓* Are they connected to condenser, or to circulating pump *✓*
 How are the pumps worked *from lower of forward engines*
 Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *✓*
 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 *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 *✓*
 What 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 *Circular tubular* Whether Steel or Iron *Iron*
 Working Pressure *90* Tested by hydraulic pressure to *180* Date of test *4/7/88*
 Description of superheating apparatus or steam chest *Vertical dome*
 Can each boiler be worked separately *✓* Can the superheater be shut off and the boiler worked separately *✓*
 No. of square feet of fire grate surface in each boiler *741* Description of safety valves *Spring* No. to each boiler *two*
 Area of each valve *1.77* 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 *8 in's* Diameter of boilers *6' 5 1/2"*
 Length of boilers *6' 0"* description of riveting of shell long. seams *Treble riv. lap* circum. seams *Single riv. lap* Thickness of shell plates *1/16"*
 Diameter of rivet holes *7/8"* whether punched or drilled *Punched* pitch of rivets *4"* Lap of plating *7 1/2"*
 Per centage of strength of longitudinal joint *78 & 65* working pressure of shell by rules *95* size of manholes in shell *10" x 14"*
 Size of compensating rings *4" x 3 1/4"* No. of Furnaces in each boiler *One*
 Outside diameter *2' 9"* length, top *3' 6"* bottom *5' 6"* thickness of plates *1/2"* description of joint *Double butt strap* if rings are fitted *No*
 Greatest length between rings *✓* working pressure of furnace by the rules *123* combustion chamber plating, thickness, sides *1/2"* back *1/2"* top *1/2"*
 Pitch of stays to ditto, sides *7 1/2 x 8* back *7 1/2 x 7 1/2* top *7 1/2 x 1 1/2* If stays are fitted with nuts or riveted heads *Both* working pressure of plating by rules *700*
 Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *90* end plates in steam space, thickness *5/8* doubled
 Pitch of stays to ditto *15 1/4 x 11* how stays are secured *Double nuts* working pressure by rules *155* diameter of stays at smallest part *2"* working pressure by rules *101* Front plates at bottom, thickness *5/8* Back plates, thickness *5/8*
 Greatest pitch of stays *9"* working pressure by rules *148* Diameter of tubes *3 1/2"* pitch of tubes *4 3/4" x 4 3/4"* thickness of tube plates, front *5/8* back *5/8* how stayed *Stay tubes* pitch of stays *Irregular* width of water spaces *5"*
 Diameter of Superheater or Steam chest *1' 8 1/2"* length *2' 1/4"* thickness of plates *1/2"* description of longitudinal joint *Double riv. lap* diam. of rivet holes *3/4"*
 Pitch of rivets *3/4"* working pressure of shell by rules *144* 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 *1/16"* how stayed *Dished*
 Superheater or steam chest; how connected to boiler *by flange*

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 casing gear _____ if steam from main boilers can
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,

Manufacturer.

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

The engines and boiler of this vessel have been repaired & fitted on board at Dundee.

The boiler safety valves have been set under steam & a working pressure of 90 lb per sq in & the engines tried under steam & found all in order.

The machinery of this vessel is now in good condition & eligible, in our opinion, to be classed marked **L.M.C. 8-88**

The amount of Entry Fee £ 1 : :
Special £ 6 : 6 :
Donkey Boiler Fee £ : :
Certificate (if required) £ 2 : 6 : 8th Aug. 1888.
(To be sent as per margin.)
(Travelling Expenses, if any, £ 1-13-8)

the charge
paid 15/8/88
received by me,

W. Darling & R. Kydell
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRIDAY 10 AUGUST 1888

2yfe 10/8/88

Lmb 8/88

It is submitted that this vessel is eligible to have L.M.C. 8-88 recorded.
10/8/88