

# REPORT ON MACHINERY.

Port of Dundee

Received at London Office SAT 4 11<sup>30</sup>

No. in Survey held at Dundee Date, first Survey Oct 21<sup>st</sup> 91 Last Survey May 23<sup>rd</sup> 1892.  
Reg. Book. (Number of Visits 16)

508 on the SS. Hungarian Tons { Gross 1552  
Net 984

Master Lawson Built at Port Glasgow By whom built Blackwood & Gordon When built 1849-3  
Engines made at Port Glasgow By whom made Blackwood & Gordon when made 1849.

Boilers made at Dundee By whom made W B Thompson & Co Ltd when made 1892

Registered Horse Power 160 Owners Bell & Lime Port belonging to Dundee  
Nom. Horse Power as per Section 28

**ENGINES, &c.—** Description of Engines No. of Cylinders

Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft as per rule as fitted

Diameter of Tunnel shaft as per rule as fitted Diameter of Crank shaft journals Diameter of Crank pin Size of Crank webs

Diameter of screw Pitch of screw No. of blades State whether moveable Total surface

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room In Holds, &c.

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size

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

Are all connections with the sea direct on the skin of the ship 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

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

What pipes are carried through the bunkers How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight

Is it fitted with a watertight door worked from

**OILERS, &c.—** (Letter for record (N)) Total Heating Surface of Boilers 2057 sq ft

No. and Description of Boilers One - double ended Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs

Date of test 1/3/92 Can each boiler be worked separately  Area of fire grate in each boiler 85.5 sq ft No. and Description of safety valves to each boiler Two spring loaded Area of each valve 9.62 Pressure to which they are adjusted 90 lbs Are they fitted with casing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 12 ins Mean diameter of boilers 13.8"

Length 15.3" Material of shell plates steel Thickness 3/8 Description of riveting: circum. seams double riv lap long. seams treble riv lap

Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 4 1/2 Lap of plates or width of butt straps 8"

Per centages of strength of longitudinal joint rivets 71.4 Working pressure of shell by rules 91.8 Size of manhole in shell 14 x 13  
plate 43.6

Size of compensating ring 6 1/2 x 7/8 No. and Description of Furnaces in each boiler one - plain Material Steel Outside diameter 34"

Length of plain part top 6.0 Thickness of plates crown 1/2 Description of longitudinal joint double butt straps No. of strengthening rings none  
bottom 6.0 bottom 1/2

Working pressure of furnace by the rules 110 lbs Combustion chamber plates: Material steel Thickness: Sides 1/2 Back  Top 1/2 Bottom 5/8

Pitch of stays to ditto: Sides 9 x 9 Back  Top 9 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 94.8

Material of stays Iron Diameter at smallest part 1.28 Area supported by each stay 81 sq in Working pressure by rules 95 lbs End plates in steam space: Material Steel Thickness 1/16 Pitch of stays 18 x 16 How are stays secured double nuts Working pressure by rules 91 lbs Material of stays steel

Diameter at smallest part 2.28 Area supported by each stay 288 sq in Working pressure by rules 109 Material of Front plates at bottom steel

Thickness 3/4 Material of Lower back plate  Thickness  Greatest pitch of stays  Working pressure of plate by rules

Diameter of tubes 3" Pitch of tubes 4 3/4 x 5 Material of tube plates steel Thickness: Front 3/4 Back 1/16 Mean pitch of stays 14 1/2 x 10

Pitch across wide water spaces 14 1/2 Working pressures by rules 95 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 1 1/2 x 3/4 double Length as per rule 2.10 Distance apart 9 Number and pitch of Stays in each 3 of 9" pitch

Working pressure by rules 98 Superheater or Steam chest; how connected to boiler flanged Can the superheater be shut off and the boiler worked separately  Diameter 2.11 1/2 Length 8.0 Thickness of shell plates 3/8 Material steel Description of longitudinal joint double lap Diam. of rivet holes 7/8 Pitch of rivets 2 3/4 Working pressure of shell by rules 141 Diameter of flue  Material of flue plates  Thickness

If stiffened with rings  Distance between rings  Working pressure by rules  End plates: Thickness 3/8 How stayed One 2 1/2 dia stay

Working pressure of end plates 100 Area of safety valves to superheater  Are they fitted with casing gear

**DONKEY BOILER**— Description *Vertical cross tube*  
 Made at *Dundee* By whom made *W.B. Thompson & Co. Lim* When made *1892* Where fixed *Stoke hold*  
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *624* Fire grate area *18 sq ft* Description of safety valves *One spring loaded*  
 No. of safety valves *one* Area of each *8.3* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *5' 6"* Length *13' 6"* Material of shell plates *steel* Thickness *3/8*  
 Description of riveting long seams *double riv lap* Diameter of rivet holes *3/4* Whether punched or drilled *drilled* Pitch of rivets *2 3/4*  
 Lap of plating *3 1/8* Per centage of strength of joint Rivets *Y2.8* Plates *Y2.7* Thickness of shell crown plates *3/4* Radius of do. *flat* No. of Stays to do. *7*  
 Dia. of stays *1 1/4* Diameter of furnace Top *4' 2 1/2"* Bottom *4' 10 1/2"* Length of furnace *7 ft* Thickness of furnace plates *9/16* Description of joint *single riv lap* Thickness of furnace crown plates *5/8* Stayed by *7 solid stays & dished* Working pressure of shell by rules *82.6 lbs*  
 Working pressure of furnace by rules *86 lbs* Diameter of uptake *12 1/2"* Thickness of uptake plates *3/8* Thickness of water tubes *3/8*  
**SPARE GEAR.** State the articles supplied:— ✓

RETAIN

The foregoing is a correct description,  
*W. B. THOMPSON & Co., Limited* Manufacturer.  
*W. B. Thompson*

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

The new main and donkey boilers for this vessel have been constructed of steel under special survey. The material has been tested by the Society's Surveyors at the steel works and the certificates are annexed. The safety valves have been set to the working pressures of 90 lbs and 80 lbs per sq in.

Materials and workmanship are good.

The machinery is now in good and safe working condition and the vessel is in my opinion eligible to be classed with the notification *LMC 5.92. + NB 5.92.*

RETAIN

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	5	:	5	May 21. 18. 92.
Donkey Boiler Fee .. .. .	2	:	2	When received,
Travelling Expenses (if any) £	:	:	:	June 3 <sup>rd</sup> 18. 92.

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

Committee's Minute **TUES. 7 JUN 1892**

**FRI 1 JUL 1892**

Assigned



© 2019

Lloyd's Register Foundation