

# REPORT ON MACHINERY.

No. 276

Received at London Office THURSDAY 20 SEPT 1883

No. in Survey held at *Dundee*  
Reg. Book.

Date, first Survey *24/11/82* Last Survey *16<sup>th</sup> Aug. 1883*  
(Number of Visits.....) *811.41*

on the *S.S. "Gasper"*

Tons *256.48*

Master *Mc Millan* Built at *Dundee* By whom built *W.B. Thompson* When built *1883*

Engines made at *Dundee* By whom made *W.B. Thompson* when made *1883*

Boilers made at *Do.* By whom made *W.B. Thompson* when made *1883*

Registered Horse Power *99* Owners *Dundee Gen. Line S.S. Co (Lim)* Port belonging to *Dundee*  
(*P. M. Duncan Esq.*)

## ENGINES, &c.—

Description of Engines *Direct Acting Compound Int. Cyrs Surface Condensing*  
Diameter of Cylinders *25" & 50"* Length of Stroke *42"* No. of Rev. per minute *70* Point of Cut off, High Pressure *1/2* Low Pressure *1/2*  
Diameter of Screw shaft *10"* Diam. of Tunnel shaft *9 1/2"* Diam. of Crank shaft journals *9 3/4"* Diam. of Crank pin *9 3/4"* size of Crank webs *6 1/2" x 11"*  
Diameter of screw *12" 4"* Pitch of screw *16" 0"* No. of blades *4* state whether moveable *not* total surface *46.5 feet*  
No. of Feed pumps *two* diameter of ditto *3 1/2"* Stroke *21"* Can one be overhauled while the other is at work *yes*  
No. of Bilge pumps *two* diameter of ditto *3 1/2"* Stroke *21"* Can one be overhauled while the other is at work *yes*  
Where do they pump from *all compartments*  
No. of Donkey Engines *two* Size of Pumps *7" x 18" & 6" x 8 1/2" x 3 1/2"* Where do they pump from *Tanks all compartments*  
*Thru ship side (Feed) from Sea Tanks Hotwell. to boilers and on Deck*  
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 *5"* Are they connected to condenser, or to circulating pump *Circulating*  
How are the pumps worked *by levers 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 *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 *before launch 23/6/83*  
Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *top of cylinders*

## BOILERS, &c.—

Number of Boilers *one* Description *Circular Tubular* Whether Steel or Iron *Steel*  
Working Pressure *100 lbs* Tested by hydraulic pressure to *200 lbs* Date of test *13<sup>th</sup> July 1883*  
Description of ~~superheating apparatus~~ or steam chest *Horizontal Dumb*  
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 *72 feet* Description of safety valves *Direct Spring 2* No. to each boiler *two*  
Area of each valve *19.63"* 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 *9"* Diameter of boilers *14" 6"*  
Length of boilers *11" 3"* description of riveting of shell long. seams *lap. double R* circum. seams *lap D.R* Thickness of shell plates *1"*  
Diameter of rivet holes *1 3/8"* whether punched or drilled *drilled* pitch of rivets *5-3/8"* Lap of plating *9/8" & 5/8"*  
Per centage of strength of longitudinal joint *73 & 77%* working pressure of shell by rules *100 lbs* size of manholes in shell *17" x 13"*  
Size of compensating rings *5" x 5" x 7/8"* No. of Furnaces in each boiler *three*  
Outside diameter *46"* length, top *7" 9"* bottom *10" 6"* thickness of plates *9/16"* description of joint *butt S.R.* if rings are fitted *flanged*  
Greatest length between rings *4" 4"* working pressure of furnace by the rules *14.2 lbs* combustion chamber plating, thickness, sides *9/16"* back *9/16"* top *9/16"*  
Pitch of stays to ditto, sides *8 1/2" x 8 1/2"* back *8 1/2" x 8 1/2"* top *8 1/2" x 7 1/2"* If stays are fitted with nuts or riveted heads *nut & both ends* working pressure of plating by rules *12.7 lbs*  
Diameter of stays at smallest part *1 1/2"* B.T. working pressure of ditto by rules *45.03 lbs* end plates in steam space, thickness *3/8"*  
Pitch of stays to ditto *17" x 16"* how stays are secured *thru ends nut* working pressure by rules *100 lbs* diameter of stays at smallest part *2 3/8" steel* working pressure by rules *77.71 lbs* Front plates at bottom, thickness *3/4"* Back plates, thickness *7/8"*  
Greatest pitch of stays *11" x 8 1/2"* working pressure by rules *56.61 lbs* Diameter of tubes *3 3/4"* pitch of tubes *5 1/4" x 5"* thickness of tube plates, front *4/6"* back *4/6"* how stayed *tubes* pitch of stays *10" x 10 1/2"* width of water spaces *1 1/4" x 1 1/2"*  
Diameter of ~~Superheater~~ Steam chest *3" 9"* length *8" 3"* thickness of plates *9/16"* description of longitudinal joint *lap D.R* diam. of rivet holes *1"*  
Pitch of rivets *3 3/8"* working pressure of shell by rules *186 lbs* diameter of flue *—* thickness of plates *—* If stiffened with rings *—*  
Distance between rings *—* working pressure by rules *—* end plates of ~~superheater~~ steam chest; thickness *1 3/8"* how stayed *4 bolts thru*  
*ends nut both side of plates 2 1/2" diameter* steam chest; how connected to boiler *by two malleable nuts*

DUN109-0041

**DONKEY BOILER**— Description *one Round Vertical 3 Cross Tubes*  
 Made at *Galeshead* by whom made *Clark Chapman & Co* when made *6/83* where fixed *Stokehead*  
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *1308* fire grate area *19 feet* description of safety  
 valves *direct spring 2* No. of safety valves *one* area of each *9.62* if fitted with easing gear *yes* if steam from main boilers can  
 enter the donkey boiler *no* diameter of donkey boiler *6' 0"* length *12' 6"* description of riveting *lap 2.72*  
 Thickness of shell plates *9/16"* diameter of rivet holes *7/8"* whether punched or drilled *Punched* pitch of rivets *3 3/8"* lap of plating *4 1/2"*  
 per centage of strength of joint *73%* thickness of crown plates *9/16"* stayed by *Dished 6 stays*  
 Diameter of furnace, top *4' 8"* bottom *5' 1 3/4"* length of furnace *5' 3"* thickness of plates *9/16"* description of joint *lap 8.72*  
 Thickness of furnace crown plates *9/16"* stayed by *as above* working pressure of shell by rules *92 lbs*  
 Working pressure of furnace by rules *73 lbs* diameter of uptake *15"* thickness of plates *3/8"* thickness of water tubes *7/16"*

**SPARE GEAR.** State the articles supplied:— *1 propeller 2 sets crank pin brasses. valves for air circulating pumps 2 bolts each for top bottom ends of connecting rods 8 shafting bolts 4 turned bolts for various parts of engines 112 lbs of bolts assorted 20 boiler tubes 2 valves each for feed & bilge pumps &c*

The foregoing is a correct description,  
*W. B. Thompson* Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The Boilers and Engines of this vessel have been built under special survey and in accordance with the requirements of the Rules. The material and workmanship are of the best description. The Boilers & Engines have been tested under steam and the safety valves set to 100 lbs per square inch working pressure. and in my opinion all are in good & safe working order and eligible to be entered into the Register Book with the distinctive mark* **L.M.C. 8, 83**

*This submitted that this vessel is eligible to have the notification & L.M.C. recorded*  
*20/9/83*

The amount of Entry Fee .. £ 1 : - : - received by me,  
 Special .. .. £ 14 : 17 : 0  
 Donkey Boiler Fee .. .. £ - : - : -  
 Certificate (if required) .. £ - : - : - 14/9 1883  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ -)

Committee's Minute

FRIDAY 21 SEPT 1883

*John Sturrock*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping  
*Dundee & District*