

REPORT ON MACHINERY.

Port of *Aberdeen*

Received at London Office *5/11/91*

No. *4297*

No. in Survey held at *Aberdeen*

Date, first Survey *Nov 4th 1890* Last Survey *Nov 4th 1891*

Reg. Book.

(Number of Vistas *91*)

on the

S S "Thermopylae"

Tons Gross *3711*

Net *2395*

When built *1891*

Master *A. Simpson* Built at *Aberdeen* By whom built *Hall Russell & Co*

Engines made at *Aberdeen* By whom made *Messrs Hall Russell & Co* when made *1891*

Boilers made at *Aberdeen* By whom made *Messrs Hall Russell & Co* when made *1891*

Registered Horse Power *400* Owners *Messrs J. Thompson & Co* Port belonging to *Aberdeen*

ENGINES, &c.—

Description of Engines *Triple Expansive direct acting* No. of Cylinders *Three*

Diam. of Cylinders *28", 42", and 40"* Length of Stroke *54"* Rev. per minute *Point of Cut off, High Pressure 4/1 Low Pressure 3/3*

Diameter of Screw shaft *15"* Diam. of Tunnel shaft *13 1/2"* Diam. of Crank shaft journals *15"* Diam. of Crank pin *1 1/2"* size of Crank webs *24" x 10 1/2"*

Diameter of screw *14", 10 1/2"* Pitch of screw *21", 6"* No. of blades *4* state whether moveable *Yes* total surface *85.5 sq ft*

No. of Feed pumps *two* diameter of ditto *4 1/2"* Stroke *2 1/2"* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *two* diameter of ditto *4 1/2"* Stroke *2 1/2"* Can one be overhauled while the other is at work *Yes*

Where do they pump from *the bilges of each compartment*

No. of Donkey Engines *two* Size of Pumps *4 cpl. 9 in. 12 Ballast 1/2 1/2 1/2* Where do they pump from *the sea, hotwell*

ballast tanks, and bilges of each compartment

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 *two* and sizes *4" dia* Are they connected to condenser, or to circulating pump *circ pump*

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 *forward suction* How are they protected *strong 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 *previous to launching*

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

BOILERS, &c.—

No. of Boilers *Two* Description *byrl. double ended* Material *Steel* Letter (for record) *S*

Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs* Date of test *August 14th 1891*

Description of superheating apparatus or steam chest

Can each boiler be worked separately *Yes* Can the superheater be shut off and the boiler worked separately

square feet of fire grate surface in each boiler *115.5 sq ft* Description of safety valves *direct spring* No. to each boiler *two*

of each valve *15.9 sq ft* 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", 22"*

Length of boilers *19", 6"* description of riveting of shell long. seams *Triple riv butt* circum. seams *Triple + dbl riv, lap* Thickness of shell plates *1 3/32"*

Diameter of rivet holes *1 5/16"* whether punched or drilled *drilled* pitch of rivets *8.5"* Lap of plating *Straps 19 3/4" x 1"*

Per centage of strength of longitudinal joint *84.5%* working pressure of shell by rules *165 lbs* size of manholes in shell *12" x 16"*

Size of compensating rings *two 13"* Dbl riv No. of Furnaces in each boiler *Six* Description of Furnaces *Curves*

Outside diameter *43"* length *8 ft* thickness of plates *1 1/2"* description of joint *ribbed* if rings are fitted *Yes 5, 3, 5*

Greatest length between rings *working pressure of furnace by the rules 161 lbs* combustion chamber plating, thickness, sides *9/16"* back *9/16"* top *9/16"*

Pitch of stays to ditto, sides *7 1/2" x 7 1/2" back* top *7 1/2" x 7 1/2"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *163 lbs*

Diameter of stays at smallest part *1 3/8" screw* working pressure of ditto by rules *163 lbs* end plates in steam space, thickness *1"*

Pitch of stays to ditto *14 1/2" x 14 1/2"* how stays are secured *dbl nuts* working pressure by rules *164 lbs* diameter of stays at smallest part *2 1/2" screw* working pressure by rules *143 lbs* Front plates at bottom, thickness *1 1/8"* Back plates, thickness

Greatest pitch of stays *working pressure by rules* Diameter of tubes *3 3/4"* pitch of tubes *5 3/32"* thickness of tube plates, front *3 1/2"* back *1 5/16"* how stayed *stay tubes* pitch of stays *10 3/16" x 14 1/2"* width of water spaces *1 1/2"*

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

Pitch 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

© 2018

Lloyd's Register Foundation

ABN10-0256

4297 Abr

DONKEY BOILER— Description *Cylindrical Multitubular*
 Made at *Aberdeen* by whom made *Messrs Hall, Russell & Co.* when made *1891* where fixed *Spar deck*
 Working pressure *160 lbs* tested by hydraulic pressure to *320 lbs* No. of Certificate *111* fire grate area *25 sq ft* description of safety
 valves *direct spring* No. of safety valves *two* area of each *7 sq in* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *9 ft* length *8' 9"* description of riveting *Long: Dbl. riv butt*
 Thickness of shell plates *2 1/2"* diameter of rivet holes *3/16"* whether punched or drilled *drilled* pitch of rivets *6 5/8"* lap of plating *Strap 1 3/4"*
 per centage of strength of joint *82%* thickness of *end* plates *3 1/2"* stayed by *2 1/2" steel stays 14 1/2" x 14 1/2"*
 Diameter of furnace, top *3 1/2"* bottom *3"* length of furnace *6' 3"* thickness of plates *5/8"* description of joint *S. riv butt*
 Thickness of *comb. chamber* furnace crown plates *9/16"* stayed by *1 3/8" x 1 1/2" screw stays 7 1/2" x 7 1/2"* working pressure of shell by rules *160 lbs*
 Working pressure of furnace by rules *175 lbs* diameter of uptake *4"* thickness of plates *5/8"* thickness of water tubes *5/8"*

SPARE GEAR. State the articles supplied:— *One crank shaft, one propeller shaft, four propeller blades, one of Thomson's patent couplings, one set of coupling bolts, one pair of top end brasses and bolts and nuts for same, one pair of bottom end brasses, two bottom end bolts and nuts, two main bearing bolts, one air pump rod, one valve spindle, one feed & bilge pump plunger, valves &c.*

The foregoing is a correct description,

Hall Russell & Co.

Manufacturers

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

The Engines and boilers of this vessel have been constructed under special Survey in accordance with the rules and the approved tracings. They are of good material and workmanship and eligible in my opinion to receive the notification of L M C 11-91 in the Register Book

It is submitted that this entry is eligible for the record
CH 11-91

The amount of Entry Fee .. £ 3 : - : - received by me,

Special .. £ 40 : 15 : -

Donkey Boiler Fee .. £ 2 : 2 : -

Certificate (if required) .. £ gratis : Nov. 11 1891

(Travelling Expenses, if any, £ ..)

Committee's Minute

FRI 6 NOV 1891

+ L M C 11, 91

G. L. Hindmarsh © 2019
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register
 Foundation