

REPORT ON MACHINERY.

No. 245

Received at London Office THURSDAY 13 SEPT 1883

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

Date, first Survey *13/7/82* Last Survey *1st Sept 1883*
(Number of Visits.....)

on the *S.S. Wingsang*

Tons

Master *W.H. Jackson* Built at *Aberdeen* By whom built *Hall Russell & Co* When built *1883*

Engines made at *Aberdeen* By whom made *Hall Russell & Co* when made *1883*

Boilers made at *Aberdeen* By whom made *Hall Russell & Co* when made *1883*

Registered Horse Power *310.* Owners *Indo China, S.M. Nav. Co.* Port belonging to *London*

ENGINES, &c.—

Description of Engines *Direct acting Compound, Int. Cyl. Surface Condensing*

Diameter of Cylinders *36" & 72"* Length of Stroke *54"* No. of Rev. per minute *65* Point of Cut off, High Pressure *Ex* Low Pressure *1/2*

Diameter of Screw shaft *14"* Diam. of Tunnel shaft *14"* Diam. of Crank shaft journals *14 1/2"* Diam. of Crank pin *4 1/2"* size of Crank webs *10" x 16"*

Diameter of screw *14" 11"* Pitch of screw *22" 0"* No. of blades *4* state whether moveable *Yes* total surface *72 feet*

No. of Feed pumps *two* diameter of ditto *4 1/2"* Stroke *27"* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *two* diameter of ditto *4 1/2"* Stroke *27"* Can one be overhauled while the other is at work *Yes*

Where do they pump from *all Compartments*

No. of Donkey Engines *one* Size of Pumps *8" x 10" x 4 1/2"* Where do they pump from *sea Hotwell, Tanks &*

all compartments. 30 Boilers. Thro ship side on Deck also 1 No 7 Pulsometer

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*

Is the screw shaft tunnel watertight *Yes* and fitted with a sluice door *Yes* worked from *Top of Cylinders*

BOILERS, &c.—

Number of Boilers *two* Description *Circular Tubular* Whether Steel or Iron *Steel*

Working Pressure *100 lbs* Tested by hydraulic pressure to *200 lbs* Date of test *4th August 1883*

Description of ~~superheating apparatus~~ steam chest *Horizontal dome*

Can each boiler be worked separately *Yes* Can the superheater be shut off and the boiler worked separately *none*

No. of square feet of fire grate surface in each boiler *97.5 feet* Description of safety valves *Direct S. Z.* No. to each boiler *two*

Area of each valve *29.46"* 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 *13" 6"*

Length of boilers *17" 0"* description of riveting of shell long. seams *Butt D. R.* circum. seams *lap D. R.* Thickness of shell plates *15"*

Diameter of rivet holes *1 5/16"* whether punched or drilled *drilled* pitch of rivets *5 1/4"* Lap of plating *12 1/2" x 5 1/2"*

Per centage of strength of longitudinal joint *75 & 70%* working pressure of shell by rules *104 lbs* size of manholes in shell *16" x 13 1/2"*

Size of compensating rings *angle 5" x 3 1/2" x 7/8"* No. of Furnaces in each boiler *three each end*

Outside diameter *42"* length, top *5" 9"* bottom *8" 3"* thickness of plates *15"* description of joint *welded* if rings are fitted *corrugated*

Greatest length between rings *—* working pressure of furnace by the rules *111 lbs* combustion chamber plating, thickness, sides *1/2"* back *1/2"* top *1/2"*

Pitch of stays to ditto, sides *8" x 8"* back *8" x 8"* top *round* If stays are fitted with nuts or riveted heads *Nuts both ends* working pressure of plating by rules *120 lbs*

diameter of stays at smallest part *1 3/8" steel* working pressure of ditto by rules *6464* end plates in steam space, thickness *1 3/16"*

Pitch of stays to ditto *16" x 16"* how stays are secured *thru ends, nuts* working pressure by rules *105 lbs* diameter of stays at smallest part *2 3/8" steel* working pressure by rules *7285 lbs*

Greatest pitch of stays *8" x 10"* working pressure by rules *6666 lbs* Diameter of tubes *3 1/2"* pitch of tubes *4 1/2"* thickness of tube plates, front *3/4"* back *4/16"* how stayed *2 tubes* pitch of stays *9" x 9"* width of water spaces *1"*

Diameter of ~~Superheater~~ Steam chest *3" 0"* length *13" 3"* thickness of plates *7/16"* description of longitudinal joint *lap D. R.* diam. of rivet holes *13/16"*

Pitch of rivets *3"* working pressure of shell by rules *172 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 3/16"* how stayed *Hemispherical*

~~Superheater~~ steam chest; how connected to boiler *by two malleable heads*

ABN7-0304

3476 Pbn

DONKEY BOILER— Description *Round Vertical*

Made at *Gateshead* by whom made *Clark Chapman & Co* when made *1883* where fixed *Stokefield*
 Working pressure *75 lbs* tested by hydraulic pressure to *150 lbs* No. of Certificate *1263* fire grate area *17 feet* description of safety
 valves *Direct Spring 2* No. of safety valves *two* area of each *7* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *5.6* length *12.0* description of riveting *lap double R*
 Thickness of shell plates *1/2* diameter of rivet holes *7/8* whether punched or drilled *Punch* pitch of rivets *3 1/2* lap of plating *4 1/4*
 per centage of strength of joint *73%* thickness of crown plates *9/16* stayed by *6 = 1 7/8 bolts thru top*
 Diameter of furnace, top *4.2 1/2* bottom *4.7 7/8* length of furnace *4.7* thickness of plates *9/16* description of joint *lap S. N.*
 Thickness of furnace crown plates *9/16* stayed by *as above* working pressure of shell by rules *85 lbs*
 Working pressure of furnace by rules *80 lbs* diameter of uptake *14* thickness of plates *3/8* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *2 each top bottom end connecting rod bolts*
2 main bearing bolts. Feed oblique pump valves & seats. bolts assorted
1 set coupling bolts. 2 Eccentric straps. 1 Propeller shaft. length Crank Sh.
4 Propeller blades. 1 set Crank pin bushes. Brasses turned bolts for
various parts of the engines &c
 The foregoing is a correct description,
Hall Russell & Co Manufacturers

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 to the
requirements of the Rules.

The material and workmanship are of the best description
The engines & boilers have been tested under steam, and
the safety valves set to 100 lbs working pressure, and in my
opinion all are in good & safe working order & eligible to
be entered into the Register Book with the distinctive
mark **L.M.C. 9, 83**

The amount of Entry Fee .. £ *3* : 0 : 0 received by me,
 Special .. £ *35* : 10 : 0
 Donkey Boiler Fee .. £ .. : .. : ..
 Certificate (if required) .. £ .. : .. : .. 18
 To be sent as per margin.
 (Travelling Expenses, if any, £ *5-12-6*)

Committee's Minute

FRIDAY 14 SEPT 1883

J L M L

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

Lloyd's Register
 Foundation