

REPORT ON MACHINERY.

4131

No. 4131

Port of *Aberdeen*

Received at London Office **WED 15 OCT 1890**

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

Date, first Survey *Nov. 20th 1889* Last Survey *Oct. 13th 1890*

(Number of Visits *40*) *1249 net*
1944 gross
Tons

on the *S.S. "Inyoni"*
Master *Stuart* Built at *Aberdeen* By whom built *Messrs Hall, Russell & Co* When built *1890*

Engines made at *Aberdeen* By whom made *Messrs Hall, Russell & Co* when made *1890*

Boilers made at *Aberdeen* By whom made *Messrs Hall, Russell & Co* when made *1890*

Registered Horse Power Owners *Messrs J. T. Rennie & Son* Port belonging to *Aberdeen*

DETAILS, &c.—

Kind of Engines *Triple expansive direct acting, Inverted, Surface, condensing*

Cylinders *22, 36, 59* Length of Stroke *42* No. of Rev. per minute Point of Cut off, High Pressure *29%* Low Pressure *23*

Screw shaft *11 1/2* Diam. of Tunnel shaft *11 1/4* Diam. of Crank shaft journals *11 1/2* Diam. of Crank pin *11 1/2* size of Crank webs *8 1/4 x 15*

screw *14 x 6* Pitch of screw *14* No. of blades *4* state whether moveable *No* total surface *64.8 sq ft*

4 pumps *two* diameter of ditto *3 1/4* Stroke *23* Can one be overhauled while the other is at work *Yes*

2 pumps *two* diameter of ditto *4* Stroke *23* Can one be overhauled while the other is at work *Yes*

they pump from *the bilges of each compartment*

Monkey Engines *two* Size of Pumps *3 1/2 cyl 8" stroke 10* Where do they pump from *Sea, ballast tanks, well, and bilges of each compartment*

Are the bilge suction pipes fitted with roses *Yes* Are the roses always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Yes*

Bilge injections *One* and sizes *4 1/2 dia* Are they connected to condenser, or to circulating pump *circulating pump*

Are the pumps worked *By levers on intermediate engine*

Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Yes, 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*

Are all pipes carried through the bunkers *Forward, suction* How are they protected *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*

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.—

Number of Boilers *two* Description *Cylindrical Multitubular* Whether Steel or Iron *Steel S*

Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs* Date of test *September 13th 1890*

Position of superheating apparatus or steam chest *horizontal, dome*

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

Area of square feet of fire grate surface in each boiler *52 sq ft* Description of safety valves *direct spring* No. to each boiler *two*

Area of each valve *11 sq"* Are they fitted with easing gear *Yes* No. of safety valves to superheater *—* area of each valve *—*

Are they fitted with easing gear *Yes* Smallest distance between boilers and bunkers or woodwork *—* Diameter of boilers *14 x 4*

Length of boilers *10 x 4* description of riveting of shell long. seams *Inter-piv butt* circum. seams *Double riv lap* Thickness of shell plates *3/4*

Diameter of rivet holes *1 1/8* whether punched or drilled *drilled* pitch of rivets *8 1/2 x 4 1/2* Lap of plating *Straps 9 1/2 x 1*

Percentage of strength of longitudinal joint *84.5%* working pressure of shell by rules *163 lbs* size of manholes in shell *12 x 16*

Size of compensating rings *two 1 1/2" thick double riveted* No. of Furnaces in each boiler *three*

Outside diameter *42 1/2* length, top *7 ft* bottom *9 1/2* thickness of plates *5/8* description of joint *ribbed* if rings are fitted *Yes*

Greatest length between rings *7 ft* working pressure of furnace by the rules *188 lbs* combustion chamber plating, thickness, sides *3/8* back *3/8* top *3/8*

Pitch of stays to ditto, sides *7/8 x 7/8* back *7/8 x 7/8* top *radial* if stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *141 lbs*

Diameter of stays at smallest part *1 1/2* working pressure of ditto by rules *143 lbs* end plates in steam space, thickness *1"*

Pitch of stays to ditto *1 1/4 x 1 1/4* how stays are secured *double nuts* working pressure by rules *164 lbs* diameter of stays at smallest part *2 1/2* working pressure by rules *143 lbs*

Greatest pitch of stays *7/8 x 12 1/2* working pressure by rules *160 lbs* Diameter of tubes *3 1/2* pitch of tubes *4 1/2* thickness of tube plates, front *15/16* back *21/32*

how stayed *stay tubes* pitch of stays *4 1/2 x 1 1/4* width of water spaces *1 1/4*

Diameter of Superheater or Steam chest *40* length *6 1/2* thickness of plates *1/2* description of longitudinal joint *Double lap* diam. of rivet holes *1/2*

Pitch of rivets *2 1/8* working pressure of shell by rules *190 lbs* 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 *1/2* how stayed *stay tubes*

Superheater or steam chest; how connected to boiler *double riv, neck 3" thick*

Description of furnaces

H131. Abn

DONKEY BOILER—

Description

Vertical 4 cross tubes

Made at *Merdeen*

by whom made

Wm Hall Russell & Co

when made

1890

where fixed

*Stockhold*Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *91* fire grate area *21.99* ft² description of safetyvalves *direct spring* No. of safety valves *two* area of each *4.99* ft² if fitted with easing gear *yes* if steam from main boilers *no*enter the donkey boiler *no* diameter of donkey boiler *6ft 6"* length *13ft* description of riveting *D riv lap*thickness of shell plates *1/2"* diameter of rivet holes *13/16"* whether punched or drilled *drilled* pitch of rivets *2 1/2"* lap of plating *4 1/2"*percentage of strength of joint *64%* thickness of crown plates *13/16"* stayed by *eight 2 1/2" stays*Diameter of furnace, top *5ft* bottom *6ft* length of furnace *6' 8"* thickness of plates *21/32"* description of joint *S riv lap*Thickness of furnace crown plates *5/8"* stayed by *as above* sides *1 1/2" screw stays 8 1/2" pitch* working pressure of shell by rulesWorking pressure of furnace by rules *80 lb* diameter of uptake *18"* thickness of plates *1/2"* thickness of water tubes

SPARE GEAR. State the articles supplied:— *One crank shaft, one tail shaft, one propeller, one of coupling bolts 2 top and 2 bottom, ends bolts 2 main bearing bolts 12 ft bolts, one pair of crank pin brasses, one set of air pump and circulating valves one set of feed and bilge pump valves one set of piston springs, &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; they are of good material and workmanship, and in accordance with the Rules.

They are now in good working order and eligible in my opinion to be classed ~~HL~~ L M-C 10-90 in the Register Book.

It is submitted that this vessel is eligible to have + L.M.C. 10-90 recorded

*W.A.**15-10-90*

The amount of Entry Fee .. £ 2 : - : - received by me.

Special .. £ 31 : 11 : -

Donkey Boiler Fee .. £ 2 : 2 : -

Certificate (if required) .. £ gratis : *15/10/1890*

To be sent as per margin.

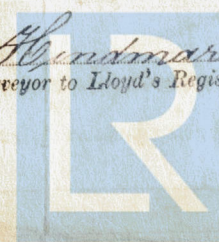
(Travelling Expenses, if any, £ ..)

Committee's Minute

TUES 21 OCT 1890

+ Lm-C 10/90

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



Lloyd's Register
Foundation