

REPORT ON MACHINERY.

Port of Aberdeen

FRI, DEC 27 1895

No. in Survey held at Aberdeen

Date, first Survey June 18th Last Survey Dec 24th 1895

Reg. Book.

Sup 16 on the Steel S.S. "King Kong"

(Number of Visits 40)

Tons { Gross 1983.47
Net 1222.98

Master J. H. Gray Built at Aberdeen By whom built Hall Russell & Co When built 1895

Engines made at Aberdeen By whom made Hall Russell & Co when made 1895

Boilers made at Aberdeen By whom made Hall Russell & Co when made 1895

Registered Horse Power 300 Owners Indo China Steamship Co Port belonging to London

Nom. Horse Power as per Section 28 295

ENGINES, &c.— Description of Engines Triple Expansion No. of Cylinders 23

Diameter of Cylinders 22 1/2, 34, 60 Length of Stroke 39 Revolutions per minute 96 Diameter of Screw shaft as per rule 10 1/8

Diameter of Tunnel shaft as per rule 10 1/4 Diameter of Crank shaft journals 11 3/4 Diameter of Crank pin 11 3/4 Size of Crank webs 8 1/2 x 1 1/2

Diameter of screw 14-0 Pitch of screw 15-0 No. of blades 4 State whether moveable No Total surface 64.8 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 23 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 23 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 6 x 4 x 6 "stroke" No. and size of Suctions connected to both Bilge and Donkey pumps one in the fore hold 3" and one in the after hold 3"

In Engine Room four 3" In Holds, &c. two in the fore hold 3" and one in the after hold 3"

No. of bilge injections all sizes 4 3/4 Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes - 3"

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None

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 fore tank & fore hold bilge How are they protected wood casing

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

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

When were stern tube, propeller, screw shaft, and all connections examined Nov 16-95 Is the screw shaft tunnel watertight Yes

Is it fitted with a watertight door Yes worked from upper platform

BOILERS, &c.— (Letter for record S.) Total Heating Surface of Boilers 4306 sq ft

No. and Description of Boilers 2 Horizontal Multitubular Working Pressure 170 Tested by hydraulic pressure to 340

Date of test 26/1/95 Can each boiler be worked separately Yes Area of fire grate in each boiler 48.75 sq ft No. and Description of safety valves to each boiler 2 Spring

Area of each valve 962 sq in Pressure to which they are adjusted 170 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean diameter of boilers 13-6"

Length 11-6" Material of shell plates steel Thickness 1 1/4" Description of riveting: circum. seams 8 R. 3/8 P. long. seams double butt straps 1" thick

Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 8 3/8" Lap of plates on width of butt straps 1-7 3/4"

Per centages of strength of longitudinal joint 85.2 Working pressure of shell by rules 189.2 Size of manhole in shell 16 x 12"

Size of compensating ring 28 x 1 1/4 No. and Description of Furnaces in each boiler 3 Horizontal Material steel Outside diameter 42 1/4"

Length of plain part 5" Thickness of plates 1 1/2" Description of longitudinal joint Welded No. of strengthening rings 1

Working pressure of furnace by the rules 179 Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1 1/16"

Pitch of stays to ditto: Sides 7 3/8" Back 7 3/8" Top 7 3/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 172

Material of stays steel Diameter at smallest part 1.25" Area supported by each stay 58.0 Working pressure by rules 187.5 End plates in steam space: Material steel Thickness 1 5/16" Pitch of stays 13 3/8" How are stays secured 8. nuts & washers Working pressure by rules 216 Material of stays steel

Diameter at smallest part 3.8" Area supported by each stay 192 sq in Working pressure by rules 176 Material of Front plates at bottom steel

Thickness 1 3/16" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 12" Working pressure of plate by rules 183.6

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" Material of tube plates steel Thickness: Front 1 5/16" Back 1 5/16" Mean pitch of stays 9.375"

Pitch across wide water spaces 13 1/2" Working pressures by rules 315 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 7 3/4 x 1 3/8" Length as per rule 31.5 Distance apart 4" Number and pitch of Stays in each 3 - 7 3/8"

Working pressure by rules 194 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes

Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓

Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

If not, state whether, and when, one will be sent?

Is a copy to sent on the Hull of the ship?

[142]-L.R.P.H.-2,001-Form No. 8.-6/9/94.-C.

DONKEY BOILER— Description *Hall Russell's Improved Vertical*
 Made at *Abendun* By whom made *Hall Russell & Co* When made *1895* Where fixed *on the upper*
 Working pressure *83* tested by hydraulic pressure to *170* No. of Certificate *182* Fire grate area *174* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *4.9* Pressure to which they are adjusted *85* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *5-6* Length *11-0* Material of shell plates *steel* Thickness *1/16*
 Description of riveting long. seams *single lap* Diameter of rivet holes *13/16* Whether punched or drilled *Yes* Pitch of rivets *2 3/4*
 Lap of plating *4* Per centage of strength of joint *13.5* Rivets *15-0* Thickness of shell crown plates *3/32* Radius of do. *almost flat* No. of Stays to do. *7*
 Dia. of stays. *2 1/4* Diameter of furnace Top *2-11 1/2* Bottom *4-9 1/2* Length of furnace *6-0* Thickness of furnace plates *9/16* Description of joint *single rivet* Thickness of furnace crown plates *7/8* Stayed by *7 stays (as above)* Working pressure of shell by rules *103*
 Working pressure of furnace by rules *97.5* Diameter of uptake *none* Thickness of uptake plates *none* Thickness of water tubes *10 B.M.G.*

SPARE GEAR. State the articles supplied:—

*as per rule with the addition of one 1/3rd crankshaft
 a spare tail shaft & propeller—*

The foregoing is a correct description,

Hall Russell & Co. Manufacturers

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel's machinery has been examined during construction.*)

The materials and workmanship are good. On completion the engines were seen running under steam with satisfactory results. The safety valves of the main & donkey boilers were adjusted under steam with like results. The main boilers are fitted with Howdens' Forced Draft & both engines & boilers appear to be constructed in accordance with the rules requirements.

The vessel is therefore eligible in my opinion to be classed as regards the machinery, and to have the notation of + L M.C. 12.95 recorded in the Register Book—

Attached will be found plans of the main & donkey boilers & forging reports.

*It is submitted that
 this vessel is eligible for
 THE RECORD.*

L.M.C. 12.95. F.D.

*A.S.
 27.12.95*

*P.M.S.
 27.12.95*

Certificate (if required) to be sent to

The amount of Entry Fee..	£ 2 : 0 :	When applied for,
Special	£ 34 : 15 :	<i>Dec 23rd 1895</i>
Donkey Boiler Fee	£ 2 : 2 :	When received,
Travelling Expenses (if any) £	:	<i>Dec 24th 1895</i>

Committee's Minute **TUES. DEC 31 1895**

Assigned

+ L M.C. 12.95

Russell Gibson
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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 Foundation