

REPORT ON MACHINERY.

No. 2748

No. in Survey held at Reg. Book.

(Received in London Office 4/4/81)

Belfast & Liverpool Date, first Survey 2nd Jan'y 1880. Last Survey 16th March 1881

on the

S.S. "British King"

2278
Tons 3559

Master S. Lecky Built at Belfast When built 1881
Engines made at Liverpool By whom made J. Jack & Coy when made 1881
Boilers made at - do - By whom made - do - when made 1881
Registered Horse Power 300 Owners British Ship Owners Co (Limited) Port belonging to Liverpool

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting Surface Condensing
Diameter of Cylinders 2 of 28" Length of Stroke 54" No. of Rev. per minute 60 Point of Cut off, High Pressure 5/8th Low Pressure 5/8th
Diameter of Screw shaft 15 1/2" Diameter of Tunnel shaft 14 1/2" Diameter of Crank shaft journals 15 1/2" Diameter of Crank pin 15 1/2" size of Crank webs 9 1/2" x 21"
Diameter of screw 20ft Pitch of screw 23 1/4 6" No. of blades 4 state whether moveable Yes total surface 100ft
No. of Feed pumps 2 diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work Yes
Where do they pump from Each compartment, Engine room, Stokehold & fore and after peaks
No. of Donkey Engines 1 of 2 Cyl^{rs} 7" diam x 10" stroke Size of Pumps 5" diam 2 of Where do they pump from Sea, bilges, Boilers, hot well to Boilers, Condenser, Deck and overboard.
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 1 and sizes 6" Are they connected to condenser, or to circulating pump Circulating pump
How are the pumps worked Four and links to cross head of piston rods.
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves & cocks
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 Suction to fore compartments How are they protected Good casings
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 At this time
Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper deck.

BOILERS, &c.—

Number of Boilers Three Description Cylindrical Rth Tubular fired from both ends.
Working Pressure 90 Tested by hydraulic pressure to 180 Date of test 18th Decr 1880
Description of superheating apparatus or steam chest Cyl^{dr} Horizontal steam chest
Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately No
No. of square feet of fire grate surface in each boiler 100ft Description of safety valves Spring.
No. to each boiler 2 area of each valve 25.96 Are they fitted with easing gear Yes
No. of safety valves to superheater 1 area of each valve 1 are they fitted with easing gear 1
Smallest distance between boilers and bunkers or woodwork 2 1/2 6"
Diameter of boilers 11 1/2 6" Length of boilers 17 1/2 6" description of riveting of shell long. seams D.B.S. D. Rth circum. seams D. R. Laps
Thickness of shell plates 3 3/32 diameter of rivet holes 1 1/8 whether punched or drilled drilled pitch of rivets 4 1/8
Lap of plating 6 1/4 per centage of strength of longitudinal joint 74% working pressure of shell by rules 96 lbs
Size of manholes in shell 16" x 12" size of compensating rings 6" x 3 1/4"
No. of Furnaces in each boiler 4 outside diameter 2 1/2 11" length, top 6' 0" bottom 8' 0" T^h fitted
Thickness of plates 1 1/2 description of joint Welded if rings are fitted No greatest length between rings —
Working pressure of furnace by the rules 106 lbs
Combustion chamber plating, thickness, sides 7/16 back 7/16 top 1/2
Pitch of stays to ditto sides 7 3/4 back 7 3/4 top 7 3/4
If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 90 lbs
Diameter of stays at smallest part 1 1/8 working pressure of ditto by rules 110 lbs
End plates in steam space, thickness 1/16 pitch of stays to ditto 14" x 14 1/2" how stays are secured 8 lbs Nuts & Rth washers
Working pressure by rules 92 lbs diameter of stays at smallest part 2 1/2 working pressure by rules 109 lbs
Front plates at bottom, thickness 1/16 Back plates, thickness 1/16 greatest pitch of stays 14 1/2 working pressure by rules 92 lbs

Diameter of tubes $3\frac{1}{4}"$ pitch of tubes $4\frac{1}{2}"$ thickness of tube plates, front $\frac{5}{8}"$ back $\frac{5}{8}"$
 How stayed *Lake stays* pitch of stays $13\frac{1}{2}" \times 9"$ width of water spaces $1\frac{1}{4}"$
 Diameter of ~~Superheater~~ Steam chest $3' 6"$ length $17' 6"$
 Thickness of plates $\frac{3}{8}"$ description of longitudinal joint *1. Rtd Laps* diameter of rivet holes $\frac{3}{4}"$ pitch of rivets $3"$
 Working pressure of shell by rules 125 lb Diameter of flue --- thickness of plates ---
 If stiffened with rings --- distance between rings --- Working pressure by rules ---
 End plates of ~~superheater~~ steam chest; thickness $\frac{1}{2}"$ How stayed *4 Quilt stays*
~~Superheater~~ on steam chest; how connected to boiler *2 Malleable iron branches*
DONKEY BOILER— Description *Cylindrical Retn tubular*
 Made at *Belfast* By whom made *Harland & Wolff* when made *1881*
 Where fixed *Household use* working pressure 50 Tested by hydraulic pressure to 100 No. of Certificate 101
 Fire grate area 24.3 Description of safety valves *Spring* No. of safety valves 2 area of each 7.06
 If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Diameter of donkey boiler $10' 3"$ length $8' 9"$ description of riveting *1. Rtd Laps*
 thickness of shell plates $\frac{1}{2}"$ diameter of rivet holes $\frac{7}{8}"$ whether punched or drilled *drilled*
 pitch of rivets $3\frac{3}{4}"$ lap of plating $7"$ per centage of strength of joint 76%
 thickness of crown plates --- stayed by ---
 Diameter of furnace, top $2' 8\frac{1}{2}"$ bottom --- length of furnace $5' 10"$ $2' 7"$ between rings
 thickness of plates $\frac{7}{16}"$ description of joint *Bull strips*
 thickness of furnace crown plates $\frac{7}{16}"$ stayed by ---
 Working pressure of shell by rules 66 working pressure of furnace by rules $49"$
 diameter of uptake --- thickness of plates --- thickness of water tubes ---

The foregoing is a correct description,

James Sica Co Manufactured for Main Boilers & Engines.

General Remarks (State quality of workmanship, opinions as to class, &c. *The material and workmanship is of good quality and in accordance with the requirements of the Rules. They have been surveyed during the whole course of construction and while being fitted on board of the vessel, and are now in my opinion eligible for the Notification ⁺Lloyd's M.C. and to be marked from this date. 3rd month 1881.*

It is submitted that this vessel is eligible to have the notification ⁺Lloyd's M.C. 3, 81 recorded in the Register Book.

4/4 81.

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

Special £ 35 : : ..

Certificate (if required) .. £ : : 2nd April 1881

To be sent as per margin.

(Travelling Expenses, if any, £ 6 - 6 - ..)

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

Committee's Minute

Tuesday April, 5th 1881