

REPORT ON MACHINERY.

Port of *Sunderland*

Received at London Office *10* JAN 1890

No. *15352*

Survey held at *Sunderland*

Date, first Survey *26th June 1889* Last Survey *16th Jan'y 1890*

eg. Book.

(Number of Visits *24*)

3206.99

Tons *2446.40*

on the *S.S. "Maori King"*

Master *J. Ruske*

Built at *Sunderland* By whom built *Wm Doxford & Sons*

When built *1890*

Engines made at *Sunderland* By whom made *Wm Doxford & Sons*

when made *1890*

Boilers made at *Sunderland* By whom made *Wm Doxford & Sons*

when made *1890*

Registered Horse Power *450* Owners *Wm Ross & Coy*

Port belonging to *London*

Rule

386

GINES, &c.—
Description of Engines *Triple compound, Inverted, direct acting.*

Diameter of Cylinders *24" 44" 41"* Length of Stroke *48"* No. of Rev. per minute *60* Point of Cut off, High Pressure *1/2 stroke* Low Pressure *1/2 stroke*

Diameter of Screw shaft *13 1/2"* Diam. of Tunnel shaft *13 1/2"* Diam. of Crank shaft journals *13 1/2"* Diam. of Crank pin *13 1/2"* size of Crank webs *9 1/2" x 18"*

Diameter of screw *17-9"* Pitch of screw *19-0"* No. of blades *4* state whether moreable *not* total surface *85 sq*

No. of Feed pumps *2* diameter of ditto *4"* Stroke *32"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* diameter of ditto *4"* Stroke *32"* Can one be overhauled while the other is at work *yes*

Where do they pump from *Tanks, engine room and tunnel wells*

No. of Donkey Engines *2* Size of Pumps *4 1/2" x 9" x 10"* Where do they pump from *Tanks engine room*

and after well, hot well & sea

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 *4"* Are they connected to condenser, or to circulating pump *circulating pumps*

Are the pumps worked *by levers on 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 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*

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 *new vessel*

Are the screw shaft tunnel watertight *—* and fitted with a sluice door *yes* worked from *top platform.*

BOILERS, &c.—
Number of Boilers *2* Description *Ordinary type, double ended* Whether Steel or Iron *steel*

Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs* Date of test *12-11-89*

Description of superheating apparatus or steam chest *none*

Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *no superheater*

No. of square feet of fire grate surface in each boiler *100 sq* Description of safety valves *direct spring* No. to each boiler *2*

Area of each valve *14 sq* 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 *18"* Diameter of boilers *14-0"*

Length of boilers *16-0"* description of riveting of shell long. seams *treble butt straps* circum. seams *center treble riv- ends double riv-* Thickness of shell plates *1 1/2"*

Diameter of rivet holes *1 1/32"* whether punched or drilled *drilled* pitch of rivets *8 1/4" & 4 1/8"* Lap of plating *18" straps*

Percentage of strength of longitudinal joint *85%* working pressure of shell by rules *160 lbs* size of manholes in shell *16" x 12"*

Size of compensating rings *6" x 1 1/2"* No. of Furnaces in each boiler *6*

Outside diameter *3-5 1/2"* length, top *6-6"* bottom *6-6"* thickness of plates *9/16"* description of joint *welded, corrugated* Rings are fitted *no*

Greatest length between rings *—* working pressure of furnace by the rules *168 lbs* combustion chamber plating, thickness, sides *9/16"* back *—* top *9/16"*

Pitch of stays to ditto, sides *1 1/2" x 1 1/2"* back *—* top *1 1/4" x 1 1/2"* stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *162 lbs*

Diameter of stays at smallest part *1 1/2"* working pressure of ditto by rules *169 lbs* end plates in steam space, thickness *1"*

Pitch of stays to ditto *16" x 15 1/2"* how stays are secured *nuts* working pressure by rules *160 lbs* diameter of stays at smallest part *2 1/2"*

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

Diameter of Superheater or Steam chest *none* length *—* thickness of plates *—* description of longitudinal joint *—* diam. of rivet holes *—*

Pitch of 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 *—*

Total heating surface *6300 sq*

Description of furnaces & boiler

DONKEY BOILER— Description *Circular vertical, Cochran*
 Made at *Birkenhead* by whom made *Cochran & Co* when made *24-9* *Stokhold*
 Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *834* fire grate area *2* description of say
 valves *direct spring* No. of safety valves *2* area of each *4.04 sq ft* if fitted with easing gear *2* steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *4-6"* length *15-6"* description of riveting *riv^d lap*
 Thickness of shell plates *3/16"* diameter of rivet holes *13/16"* whether punched or drilled *drilled* pitch of rivets *2 1/4"* of plating *4 1/4"*
 per centage of strength of joint *40-45%* thickness of crown plates *13/32"* stayed by *hemispherical*
 Diameter of furnace, *3-1 had* bottom *6-2"* length of furnace *—* thickness of plates *1/2"* description of joint *riv^d lap*
 Thickness of furnace crown plates *1/2"* stayed by *hemispherical* working pressure rules *43 lbs*
 Working pressure of furnace by rules *42 lbs* diameter of uptake *18" x 20"* thickness of plates *1/2"* thickness of water
 Plating & rivets of steel, tubes of iron
SPARE GEAR. State the articles supplied: *Top and bottom end bolts and nuts, two main bearing bolts & nuts, one set of coupling bolts, feed pump valves, bolts, nuts & iron, propeller*

The foregoing is a correct description,
William Daefer Manufacturer of main engines and boilers

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

The main steam pipes have been tested by hydraulic pressure 320 lbs. The machinery and boilers have been constructed under special survey, the material and workmanship are good and efficient and the engines when tried under steam worked satisfactorily. In my opinion the machinery of this vessel is eligible for the notification in the Register Book of + LMC 1-90

It is submitted that this vessel is eligible to have + L.M.C. 1-90 recorded

M.A.

20-1-90

The amount of Entry Fee .. £ *3* : : received by me,
 Special .. £ *42 10* : :
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : : *18-1-90*
 To be sent as per margin.

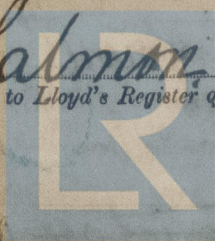
(Travelling Expenses, if any, £)

Committee's Minute

TUES 21 JAN 1890

+ LMC 1/90

John Salmon © 2021
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register Foundation