

REPORT ON MACHINERY.

O. 015
 No. in Survey held at *Hamburg* Date, first Survey *28th Mai* Last Survey *19th Sept 1883*
 g. Book.
 on the *S. S. Emma Pauber.* Tons *1306.91*
 Master *Lemmel* Built at *Reiherstieg Schiffswerke* When built *1883*
 Engines made at *Hamburg* By whom made *d^o* when made *1883*
 Makers made at *Hamburg* By whom made *d^o* when made *1883*
 Registered Horse Power *130.-* Owners *Pauber Gebr.* Port belonging to *Hamburg*

GINES, &c.—
 Description of Engines *Compound, inverted direct acting*
 Diameter of Cylinders *30" x 56"* Length of Stroke *36"* No. of Rev. per minute *72* Point of Cut off, High Pressure *1/2* Low Pressure *1/2*
 Diameter of Screw shaft *10"* Diameter of Tunnel shaft *9 3/4"* Diameter of Crank shaft journals *10"* Diameter of Crank pin *10"* size of Crank webs *11 1/2 x 7 1/2"*
 Diameter of screw *13 9/16"* Pitch of screw *13 6/16"* No. of blades *4* state whether moveable _____ total surface _____
 Diameter of Feed pumps *2* diameter of ditto *4 3/4"* Stroke *18"* Can one be overhauled while the other is at work *yes*
 Diameter of Bilge pumps *2* diameter of ditto *4 3/4"* Stroke *18"* Can one be overhauled while the other is at work *yes*
 Where do they pump from *the back tank Engine room bilge and Well in Boiler Room also Well in*
 Diameter of Donkey Engines *1 & 1* Injector Size of Pumps *4" - 9" stroke* Where do they pump from *Bilge connection pipes to well*
Connection and Sea. Injector only through the tank, Engine tank and both fore tanks
 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
 Diameter of bilge injections *2* and sizes *3 1/2" x 5"* Are they connected to condenser, or to circulating pump *3 1/4" of Condensor 5" of Circulating pump*
 How are the pumps worked *Condensor from back tank, back Well, Well in boiler room, Circulating*
 Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Valves*
 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 *yes*
 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 *Injector and fore tank* How are they protected *Flanges in the reept bulkheads*
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes* How are they protected *Wood casing over the pipes*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *by return valves*
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock _____

The *the screw shaft tunnel watertight yes* and fitted with a sluice door *yes* worked from *Engine Room*
 ILERS, &c.—
 Number of Boilers *2* Description *Tabular Boilers with separated back combustion chamber*
 Working Pressure *20 lb* Tested by hydraulic pressure to *1062 Atm* Date of test *3.7.83*
 Description of superheating apparatus or steam chest *Horizel Dome*
 Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately _____
 Number of square feet of fire grate surface in each boiler *40 sq* Description of safety valves *spring valves*
 Number to each boiler *2* area of each valve *12.5 sq" - 4"* Are they fitted with easing gear *yes*
 Number 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 *12' - 4 1/4"* Length of boilers *10'0"* description of riveting of shell long. seams *double* circum. seams *double*
 Thickness of shell plates *7/16"* diameter of rivet holes *1 1/8"* whether punched or drilled _____ pitch of rivets *3 5/8"*
 To top of plating *11 1/2" x 5 1/2"* per centage of strength of longitudinal joint *13-68 96 B-714* working pressure of shell by rules *80, 09 lbs*
 Size of manholes in shell *16"* size of compensating rings *26" - 3 1/4"*
 Number of Furnaces in each boiler *2* outside diameter *3' - 5 1/16"* length, top *7' - 0 5/8"* bottom _____
 Thickness of plates *7/32"* description of joint *single* if rings are fitted _____ greatest length between rings _____
 Working pressure of furnace by the rules *88 lbs*
 Combustion chamber plating, thickness, sides *7/16"* back *7/16"* top *7/16"*
 Pitch of stays to ditto, sides *7 1/2"* back *7" x 8"* top _____
 Are stays fitted with nuts or riveted heads *with nuts* working pressure of plating by rules *84 lbs*
 Diameter of stays at smallest part *1 3/8"* working pressure of ditto by rules *3406 lbs*
 End plates in steam space, thickness *1/16" - 5/8"* pitch of stays to ditto *15" x 13 1/2"* how stays are secured *with nuts*
 Working pressure by rules *82 lbs* diameter of stays at smallest part *2 1/8" x 2 1/2"* working pressure by rules *4552 lbs*
 Front plates at bottom, thickness *5/8"* Back plates, thickness *5/8"* greatest pitch of stays _____ working pressure by rules *152 lbs*

Hanning - OUSA

Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{1}{2}" \times 4\frac{1}{16}"$ thickness of tube plates, front $\frac{1}{16}"$ back $\frac{1}{16}"$
How stayed pitch of stays $13\frac{1}{2}" \times 13\frac{1}{16}"$ width of water spaces
Diameter of Superheater or Steam chest length
Thickness of plates description of longitudinal joint diameter 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

DONKEY BOILER— Description *Tabular boiler made of Steel*
Made at *Hamburg* By whom made *Reihardt Schiff Werft* when made *1883*
Where fixed *Boiler Room* working pressure *70 lbs* Tested by hydraulic pressure to *9 1/2 lbs* No. of Certificate
Fire grate area *12 sq ft* Description of safety valves *lever loaded* No. of safety valves *1* area of each *7 sq ft*
If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *yes*
Diameter of donkey boiler *6' - 6 1/2"* length *6' 0"* description of riveting *double*
thickness of shell plates *7/16"* diameter of rivet holes *7/8"* whether punched or drilled *drilled*
pitch of rivets *3"* lap of plating *5 1/4"* per centage of strength of joint
thickness of crown plates *7/8"* stayed by *Stay tubes 16 1/2" x 10 1/16" Stays 2 1/8" x 14"*
Diameter of furnace, top *34"* bottom length of furnace *6' 0"*
thickness of plates *7/16"* description of joint *riveted*
thickness of furnace crown plates stayed by
Working pressure of shell by rules working pressure of furnace by rules
diameter of uptake thickness of plates thickness of water tubes

The foregoing is a correct description,

Manufacturer.

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

*The Engine and Boilers of this Vessel are of the very best Workmanship and of very good material and made according to Lloyd's Rules and in my Opinion, the Vessel ought to be marked with **L MC 9.83** in the Register Book.*

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

Special .. £ *19:10:0.*

Certificate (if required) .. £ : : 18

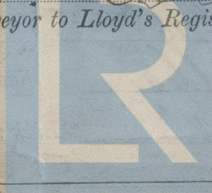
To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute **TUESDAY 2 OCTOBER 1883** 18

*Submitted that this vessel is eligible to be marked with **L MC 9.83** in the Register Book.*
M. E. 9.83
24.9.83

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



Lloyd's Register
Foundation