

REPORT ON MACHINERY.

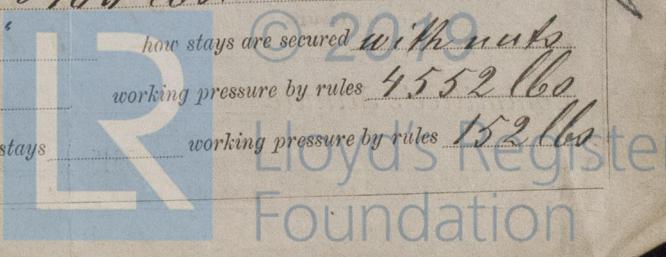
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No. in Survey held at Hamburg Date, first Survey 28th Mai Last Survey 19th Sept 1883
 g. Book. S. S. Emma Pauber. (Received at London Office Rec'd 24th SEP, 1883.)
 on the S. S. Emma Pauber. Tons 1306.91
 Master Lemmel Built at Reiherstg Schiff Werke When built 1883
 Engines made at Hamburg By whom made D. when made 1883
 Movers made at Hamburg By whom made D. when made 1883
 Registered Horse Power 130. Owners Pauber Gebr. Port belonging to Hamburg

ENGINES, &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 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 x 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 Condenser 5" of Circulating pump
 How are the pumps worked Condenser 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
 How are pipes 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 _____
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Engine Room

BOILERS, &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 Horiztl Dome
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately _____
 Area of square feet of fire grate surface in each boiler 40 sq Description of safety valves spring valves
 Area to each boiler 2 area of each valve 12.50" - 4" Are they fitted with easing gear 1 yes
 Area 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 1 1/16" diameter of rivet holes 1 7/8" whether punched or drilled _____ pitch of rivets 3 5/8"
 Area 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" - 3/4"
 Number of Furnaces in each boiler 2 outside diameter 3' - 5 1/16" length, top 7' - 0 5/8" bottom _____
 Thickness of plates 1 3/32" description of joint single if rings are fitted _____ greatest length between rings _____
 Working pressure of furnace by the rules 88 lbs
 Thickness of 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
 Thickness of end plates in steam space, thickness 1 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 $4\frac{1}{2}$ " x $4\frac{1}{16}$ " thickness of tube plates, front $\frac{1}{16}$ " back $\frac{1}{16}$ "
 How stayed pitch of stays $13\frac{1}{2}$ " x $13\frac{1}{16}$ " 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 Schiffswerke* when made *1883*
 Where fixed *Boiler Room* working pressure *70 lbs* Tested by hydraulic pressure to *9 1/3 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 casing 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 *5/8"* stayed by *Stay tubes 16 1/2" x 10 1/16" Stays 2 1/8" x 1 1/4"*
 Diameter of furnace, top *3 1/4"* 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.M.C. 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, £)

*Submitted that this vessel is eligible to have it marked with **L.M.C. 9.83** M 24.9.83*

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

Committee's Minute TUESDAY 2 OCTOBER 1883 18

