

# REPORT ON MACHINERY.

No. 508

No. in Survey held at  
Reg. Book.

Date, first Survey

(Received at London Office 10th JULY 1882.

Last Survey 3<sup>rd</sup> July 1882

on the

*Elbing*  
*S. S. Malvinas*

Tons 219.21

Master

*H. Meyer*

Built at

*Elbing*

When built

*1882*

Engines made at

*Elbing*

By whom made

*F. Schichau*

when made

*1882*

Boilers made at

*Elbing*

By whom made

*dito*

when made

*1882*

Registered Horse Power

*70*

Owners

*Deutsche Dampfschiffahrts-Gesellschaft*

Port belonging to

*Hamburg*

## ENGINES, &c.—

Description of Engines

*Direct Acting inverted Compound*

Diameter of Cylinders *20 1/2 x 41 3/8* Length of Stroke *21 3/8* No. of Rev. per minute *75* Point of Cut off, High Pressure *3/4* Low Pressure *1/2*

Diameter of Screw shaft *6 5/8* Diameter of Tunnel shaft *6 1/2* Diameter of Crank shaft journals *6 5/8* Diameter of Crank pin *6 5/8* size of Crank webs *8 1/2 x 4 1/2*

Diameter of screw *9* Pitch of screw *1 1/2* No. of blades *4* state whether moreable *not* total surface *255 feet*

No. of Feed pumps *2* diameter of ditto *2 3/8* Stroke *13 3/4* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *1* diameter of ditto *4* Stroke *9* Can one be overhauled while the other is at work *yes*

Where do they pump from *all Bilges and Ballast tanks*

No. of Donkey Engines *1* Size of Pumps *4 1/2 in 6 3/8* Where do they pump from *from all Bilges and Ballast tanks*

*One Centrifugal pump to work from tanks and arranged to assist steamer in danger*

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 *2 3/8* Are they connected to condenser, or to circulating pump *circulating pump*

How are the pumps worked *by lever from high pressure crosshead*

Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Kingston Valves and Cocks*

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *no* 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 *none* 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*

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

*Cylindrical return tubular*

Working Pressure *75*

Tested by hydraulic pressure to

*150*

Date of test

*5<sup>th</sup> June 1882*

Description of superheating apparatus or steam chest *dome on each Boiler*

Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *—*

No. of square feet of fire grate surface in each boiler *180* Description of safety valves *Adam's Spring valves*

No. to each boiler *two* area of each valve *7<sup>th</sup> inch* 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 *12 1/2 to iron Bunker*

Diameter of boilers *7<sup>th</sup> 3<sup>rd</sup>* Length of boilers *8<sup>th</sup> 4<sup>th</sup>* description of riveting of shell long. seams *triple* circum. seams *double*

Thickness of shell plates *1 1/16* diameter of rivet holes *1<sup>st</sup>* whether punched or drilled *drilled* pitch of rivets *2 3/8*

Lap of plating *5 3/4* per centage of strength of longitudinal joint *75* working pressure of shell by rules *112*

Size of manholes in shell *12 1/2 x 16 1/2* size of compensating rings *3 3/2 x 5 1/8*

No. of Furnaces in each boiler *2* outside diameter *2<sup>nd</sup> 4 1/2* length, top *6 1/2* bottom *7<sup>th</sup> 7 1/2*

Thickness of plates *7/16* description of joint *double riveted* if rings are fitted *yes* greatest length between rings *3<sup>rd</sup> 3 1/2*

Working pressure of furnace by the rules *182*

Combustion chamber plating, thickness, sides *7/16* back *1/2* top *7/16*

Pitch of stays to ditto *7<sup>th</sup>* sides *7<sup>th</sup>* back *7<sup>th</sup>* top *10<sup>th</sup>*

If stays are fitted with nuts or riveted heads *with Nuts* working pressure of plating by rules *130*

Diameter of stays at smallest part *1<sup>st</sup>* working pressure of ditto by rules *47 1/2*

End plates in steam space, thickness *1 3/16* pitch of stays to ditto *11 1/2* how stays are secured *by double nuts*

Working pressure by rules *178* diameter of stays at smallest part *1 1/2* working pressure by rules *5600*

Front plates at bottom, thickness *1 3/16* Back plates, thickness *9/16* greatest pitch of stays *6 3/4* working pressure by rules *720*



Diameter of tubes  $3\frac{1}{4}$  pitch of tubes  $4\frac{1}{2}$  thickness of tube plates, front  $\frac{3}{4}$  back  $\frac{7}{8}$   
How stayed Stay tubes pitch of stays  $12\frac{3}{4}$  width of water spaces  $1\frac{1}{2}$   
Diameter of Superheater or Steam chest  $31\frac{1}{2}$  dome length high  $3\frac{1}{2}$   
Thickness of plates  $\frac{3}{8}$  description of longitudinal joint *duple* diameter of rivet holes  $\frac{3}{4}$  pitch of rivets  $2\frac{1}{2}$   
Working pressure of shell by rules  $14\frac{1}{2}$  Diameter of flue  $\frac{1}{2}$  thickness of plates  $\frac{1}{2}$   
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 *none*  
Made at  By whom made  when made   
Where fixed  working pressure  Tested by hydraulic pressure to  No. of Certificate   
Fire grate area  Description of safety valves  No. of safety valves  area of each   
If fitted with easing gear ☐ If steam from main boilers can enter the donkey boiler ☐  
Diameter of donkey boiler  length  description of riveting   
thickness of shell plates  diameter of rivet holes  whether punched or drilled   
pitch of rivets  lap of plating  per centage of strength of joint   
thickness of crown plates  stayed by   
Diameter of furnace, top  bottom  length of furnace   
thickness of plates  description of joint   
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,  
*J. Schichau.* Manufacturer.

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

*The Engine and Boilers of this Vessel are of the very best material and of very good workmanship and in my opinion entitle the Vessel to be marked with **Lloyd's** M.C. 7. 82. in the Register Book.*

*It is submitted that this vessel is eligible to have the notification of Lloyd's recorded M<sup>10</sup> 7/82*

The amount of Entry Fee *£2* received by me, *£2*  
Special *£11 : 5 : 0*  
Certificate (if required) .. £ : : 18  
To be sent as per margin.  
(Travelling Expenses, if any, £ 10-0-0.)

Committee's Minute *Tuesday, 11th July, 18 82.*  
*+ Del*  
*11/8/82*

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

