

## REPORT ON MACHINERY.

THUR. 3 JUL 1902

Port of *Bremerhaven*

Received at London Office 10

Survey held at *Geestmünde*Date, first Survey *10<sup>th</sup> Jan.* Last Survey *27<sup>th</sup> June* 19 *02*

on the *donkey boilers of the 5 masted sailing ship "Preussen"*  
*R. B. Petersen* Built at *Geestmünde* By whom built *J. C. Tecklenborg & Co.* Tons { Gross *5142.*  
 Net *4826*  
 When built *1902*

made at — By whom made — when made —  
 made at *Geestmünde* By whom made *J. C. Tecklenborg & Co.* when made *1902*  
 Indicated Horse Power — Owners *F. Laeisz* Port belonging to *Hamburg*

Horse Power as per Section 28 — Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

## ENGINES, &amp;c.—Description of Engines

No. of Cylinders

No. of Cranks

Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft	Lgth. of stern bush
as per rule	as per rule	as per rule	as per rule	as per rule
as fitted	as fitted	as fitted	as fitted	as fitted
Dia. of crank shaft journals	Dia. of crank pin	Size of crank webs	Dia. of thrust shaft under	
Dia. of screw	Pitch of screw	No. of blades	State whether movable	Total surface
Feed pump	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps		
Engine Room	In Holds, &c.			
Bilge injections	sizes	Connected to condenser, or to circulating pump	Is a separate donkey suction fitted in Engine room & size	
Are the bilge suction pipes fitted with roses	Are the roses in Engine room always accessible		Are the sluices on Engine room bulkheads always accessible	
connections with the sea direct on the skin of the ship	Are they Valves or Cocks			
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates	Are the discharge pipes above or below the deep water line			
Are they each fitted with a discharge valve always accessible on the plating of the vessel	Are the blow off cocks fitted with a spigot and brass covering plate			
Are the pipes carried through the bunkers	How are they protected			
Are the pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times				
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges				
Are the stern tube, propeller, screw shaft, and all connections examined in dry dock	Is the screw shaft tunnel watertight			
Is the tunnel fitted with a watertight door	worked from			

## BOILERS, &amp;c.—

(Letter for record)

Total Heating Surface of Boilers

Is forced draft fitted

## Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Can each boiler be worked separately	Area of fire grate in each boiler	No. and Description of safety valves to
Area of each valve	Pressure to which they are adjusted	Are they fitted with easing gear
Mean dia. of boilers	Length	Material of shell plates
Range of tensile strength	Are they welded or flanged	Descrip. of riveting: cir. seams
Pitch of rivets	Lap of plates or width of butt straps	long. seams
Working pressure of shell by rules	Size of manhole in shell	
No. and Description of Furnaces in each boiler	Material	Outside diameter
Thickness of plates	Description of longitudinal joint	No. of strengthening rings
Combustion chamber plates: Material	Thickness: Sides	Back
Top	Bottom	Top
Bottom	Working pressure by rules	End plates in steam space:
If stays are fitted with nuts or riveted heads	Working pressure by rules	Material of stays
Area supported by each stay	Working pressure by rules	Material of Front plates at bottom
Working pressure of plate by rules	Material of tube plates	Thickness: Front
Back	Mean pitch of stays	
Working pressures by rules	Girders to Chamber tops: Material	Depth and
Length as per rule	Distance apart	Number and pitch of Stays in each
Superheater or Steam chest; how connected to boiler	Can the superheater be shut off and the boiler worked	
Diameter	Length	Thickness of shell plates
Pitch of rivets	Working pressure of shell by rules	Diameter of flue
Material of flue plates	Thickness	
Distance between rings	Working pressure by rules	End plates: Thickness
How stayed		
Area of safety valves to superheater	Are they fitted with easing gear	



**DONKEY BOILER**— No. 1816-182 Description *Unrigger Galloway tube steel boilers*  
 Made at *Seestermünde* By whom made *J. C. Tecklenborg St. G.* When made *1902* Where fixed *Installed house on water dock*  
 Working pressure *114 lb* tested by hydraulic pressure to *228 lb* No. of Certificate *18219* Fire grate area *8 sq ft* Description of safety valves *Spring valves*  
 No. of safety valves *2* Area of each *6* Pressure to which they are adjusted *114 lb* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *6'* Length *11' 4"* Material of shell plates *S.M. steel* Thickness *9/16* Range of tensile strength *26 lb* Descrip. of riveting long. seams *double overlapped* Dia. of rivet holes *7/8"* Whether punched or drilled *drilled* Pitch of rivets *2 1/16*  
 Lay of plating *5 1/16* Per centage of strength of joint *Rivets 82* Thickness of shell crown plates *5/8"* Radius of do. *74 1/2"* No. of Stays to do. *4*  
 Size of stays *3/16" x 1 1/2"* Diameter of furnace Top *59 1/16* Bottom *67 1/32* Length of furnace *69 5/16* Thickness of furnace plates *43/64* Description of joint *Welded* Thickness of furnace crown plates *49/64* Stayed by *Uptake* Working pressure of shell by rules *126.5*  
 Working pressure of furnace by rules *115 lb* Diameter of uptake *16 1/32* Thickness of uptake plates *19/32* Thickness of water tubes *7/16*

**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,

**JOH. C. TECKLENBORG A.G.**

Manufacturer. *Schiffswort und Maschinenfabrik.*

*Herrn. Clamen.*

Dates of Survey while building  
 During progress of work in shops—  
 During erection on board vessel—  
 Total No. of visits  
*10/1. 21/1. 1/2. 8/2. 21/2. 4/3. 14/3. 19/3. 25/3. 1/4. 17/4. 3/5. 7/5. 1902.*  
*14/5. 24/5. 4/6. 9/6. 13/6. 25/6. 27/6. 1902.*  
*20.*

Is the approved plan of main boiler forwarded herewith —

“ “ “ donkey “ “ “ *Yes*

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

*Please see letters from Secretary dated 14/1. 4/2. 14/2. 28/2. 15/3. 24/3. init. E and 3/4 1902 init. M.*

Material of screw shaft — Is the screw shaft fitted with a continuous liner the whole length of the stern tube —

Is the after end of the liner made water tight in the propeller boss — If the liner is in more than one length are the joints burned —

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two liners are fitted, is the shaft lapped or protected between the liners —

*These boilers have been built of Siemens Marton steel, manufactured by Thüsing & Co. at Mühlheim a. d. Ruhr and approved of by letter from Secretary dated 28.2.02. init. E.*

*The workman ship is good and all dimensions in accordance with the approved drawing. They have been tested by hydraulic up to 228 lb sq in and found quite tight.*

*Under steam they are also quite tight and the safety valves lift freely at 114 lb sq in.*

*The boilers are fed by a duplex steam pump 2" diam. and 3 1/4" stroke.*

*They are to drive four steam cargo winches and a duplex ballast pump of 4 3/4" diam. and 6 inch stroke.*

*The boilers have been marked* *No 182.19*  
*Lloyd's Test*  
*228 lb.*  
*5.4.02 F.Th.*

*These boilers being built of good material in accordance with the approved drawing and the workmanship being also very good, they are eligible in my opinion to be classed and have the notation D.B. C. on marked against them in the Register Book.*

It is submitted that this vessel is eligible for

**THE RECORD — DB:02**

*(2 DB working pressure 114 lb)*

The amount of Entry Fee. £ *1*  
 Special . . . . . £  
 Donkey Boiler Fee . . . . . £ *4*  
 Travelling Expenses (if any) £ *15*

When applied for,

*2.7.1902*

When received,

*2.7.1902*

*F. Thomsen*

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

Committee's Minute

**FRI. 4 JUL 1902 TUES. 8 JUL 1902**

Assigned

*+ DB 02*

MACHINERY CERTIFICATE  
 WRITTEN.

LR-FAP-TK-5



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