

# REPORT ON BOILERS.

No. 1590

THUR. 21 JUL 1910

Port of Bremerhaven

Received at London Office

No. in Survey held at Geestemünde  
Reg. Book.

Date, first Survey 4<sup>th</sup> January Last Survey 16<sup>th</sup> July 1910

(Number of Visits 10)

Tons { Gross 5638.6  
Net 3545.6

on the steel screw steamer Birkenfels

Master Frerichs Built at Geestemünde By whom built Joh. C. Tecklenborg A. G. When built 1910

Engines made at Geestemünde By whom made Joh. C. Tecklenborg A. G. when made 1910

Boilers made at Geestemünde By whom made Joh. C. Tecklenborg A. G. when made 1910

Registered Horse Power 517 Owners D. J. Ges. Hansa Port belonging to Bremen

## MULTITUBULAR BOILERS ~~WITH, WITHOUT OR~~ DONKEY. — Manufacturers of Steel Friedr. Krupp

(Letter for record 2) Total Heating Surface of Boilers 1076<sup>sq</sup> Is forced draft fitted No No. and Description of

Boilers 1 cylindrical multitubular steel Working Pressure 121<sup>lb</sup> Tested by hydraulic pressure to 192<sup>lb</sup> Date of test 30.5.10

No. of Certificate 123 Can each boiler be worked separately Yes Area of fire grate in each boiler 45<sup>sq</sup> No. and Description of

safety valves to each boiler 2 spring valves Area of each valve 12.18<sup>sq</sup> Pressure to which they are adjusted 121<sup>lb</sup>

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 12<sup>in</sup> Mean dia. of boilers 12<sup>in</sup> 3/4<sup>in</sup> Length 10<sup>ft</sup>

Material of shell plates S.M. steel Thickness 5/16<sup>in</sup> Range of tensile strength 26.7-30.5<sup>tons</sup> Are the shell plates welded or flanged flanged

Descrip. of riveting: cir. seams double long. seams treble Diameter of rivet holes in long. seams 15/16<sup>in</sup> Pitch of rivets 6<sup>in</sup>

Lap of plates or width of butt straps 14<sup>in</sup> 1/2<sup>in</sup> Per centages of strength of longitudinal joint rivets 90.8% Working pressure of shell by rules 138<sup>lb</sup> Size of manhole in shell 11 1/2 x 15 1/2<sup>in</sup> Size of compensating ring 7 7/8 x 5 1/4<sup>in</sup> No. and Description of Furnaces in each

boiler None, plain Material S.M. steel Outside diameter 38 3/4<sup>in</sup> Length of plain part 7' 2 1/2<sup>ft</sup> Thickness of plates 5/16<sup>in</sup> crown 5/16<sup>in</sup> bottom 5/16<sup>in</sup>

Description of longitudinal joint welded No. of strengthening rings None Working pressure of furnace by the rules 129<sup>lb</sup> Combustion chamber

plates: Material S.M. steel Thickness: Sides 3/16<sup>in</sup> Back 1/2<sup>in</sup> Top 3/16<sup>in</sup> Bottom 5/16<sup>in</sup> Pitch of stays to ditto: Sides 8 5/8 x 7 1/2<sup>in</sup> Back 7 5/8 x 8 1/2<sup>in</sup>

Top 8 5/8 x 7 1/2<sup>in</sup> stays are fitted with nuts or riveted heads nuts Working pressure by rules 151<sup>lb</sup> Material of stays Iron Diameter at

smallest part 1 3/4<sup>in</sup> Area supported by each stay 49<sup>sq</sup> Working pressure by rules 290<sup>lb</sup> End plates in steam space: Material S.M. steel Thickness 5/16<sup>in</sup>

Pitch of stays 2 1/4 x 1 3/4<sup>in</sup> How are stays secured nuts Working pressure by rules 195<sup>lb</sup> Material of stays S.M. steel Diameter at smallest part 2 3/4<sup>in</sup>

Area supported by each stay 217<sup>sq</sup> Working pressure by rules 158<sup>lb</sup> Material of Front plates at bottom S.M. steel Thickness 7/8<sup>in</sup> Material of

Lower back plate S.M. steel Thickness 2 1/2<sup>in</sup> Greatest pitch of stays 7 1/2<sup>in</sup> Working pressure of plate by rules 186<sup>lb</sup> Diameter of tubes 3 3/4<sup>in</sup>

Pitch of tubes 4 1/2 x 4 1/2<sup>in</sup> Material of tube plates S.M. steel Thickness: Front 1/2<sup>in</sup> Back 5/16<sup>in</sup> Mean pitch of stays 8 2 3/4<sup>in</sup> Pitch across wide

water spaces 14 3/4<sup>in</sup> Working pressures by rules 140<sup>lb</sup> Girders to Chamber tops: Material S.M. steel Depth and thickness of

girder at centre 7 1/2 x 1 1/2<sup>in</sup> Length as per rule 28 3/8<sup>in</sup> Distance apart 27 1/8<sup>in</sup> Number and pitch of Stays in each 2 x 8 5/8<sup>in</sup>

Working pressure by rules 210<sup>lb</sup> Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

## VERTICAL DONKEY BOILER — No. Description Manufacturers of steel

Made at By whom made When made Where fixed Working pressure

tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can

enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile

strength Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

Lap of plating Per centage of strength of joint Rivets Plates Working pressure of shell by rules Thickness of shell crown plates

Radius of do. No. of Stays to do. Dia. of stays Diameter of furnace Top Bottom Length of furnace

Thickness of furnace plates Description of joint Working pressure of furnace by rules Thickness of furnace crown

plates Radius of do. Stayed by Diameter of uptake Thickness of uptake plates

Thickness of water tubes

The foregoing is a correct description,  
**JOH. C. TECKLENBORG A. G.**  
Schiffswerft und Maschinenfabrik  
Hamburg  
Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 25.1/11.4/11.5/30.5/4.6/7.6

{ During erection on board vessel - - - } 9.6/25.6/10.7/16.7

Total No. of visits

Is the approved plan of main boiler forwarded herewith with Register

" " " donkey " " 1572

**GENERAL REMARKS**

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

*This boiler has been built under special Survey in accordance with the approved trading of good materials, manufactured by approved works and tested as per rule by the Surveyor at Disseldorf.*

*The workmanship is good, the boiler has been tested according to German law by hydraulic pressure of 192 to per sq found quite tight and showing no alteration of form.*

*Under steam it is also tight and the safety valves lift freely at 121 to per sq  
For particulars of spare gear etc. please see Report on Main boilers and machinery*

Certificate (if required) to be sent to

The amount of Entry Fee...	When applied for.
Special ... .. £	19
Donkey Boiler Fee ... .. £	When received,
Travelling Expenses (if any) £	19

*See Report on Machinery*

*J. Thomsen*  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 22 JUL 1910

Assigned

*see minute on attached Rpt. Bhn 1590*



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