

# REPORT ON BOILERS

No. 1107

Port of *Bremerhaven*

Received at London Office

WED. 8 NOV 1905

No. in Survey held at *Geestemünde*

Date, first Survey *15<sup>th</sup> April 1905* Last Survey *4<sup>th</sup> November 1905*

Reg. Book.

(Number of Visits)

Tons { Gross  
Net

on the *donkey boiler of the steel screw steamer, "Hessen"*

Master

Built at *Geestemünde*

By whom built *Joh. C. Tecklenborg A.G.*

When built *1905*

Engines made at *Geestemünde*

By whom made *Joh. C. Tecklenborg A.G.*

when made *1905*

Boilers made at *Geestemünde*

By whom made *Joh. C. Tecklenborg A.G.*

when made *1905*

rated Horse Power *533*

Owners *Norddeutscher Lloyd.*

Port belonging to *Bremen*

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY OR DONKEY.~~ Manufacturers of Steel *Thyssen Fabr.*

(Letter for record *S*) Total Heating Surface of Boilers *16850* Is forced draft fitted *No* No. and Description of

Boilers *one multitubular*

Working Pressure *220* Tested by hydraulic pressure to *292* Date of test *15.9.05.*

No. of Certificate *54*

Can each boiler be worked separately *Yes*

Area of fire grate in each boiler *58.14* No. and Description of

safety valves to each boiler *two spring valves*

Area of each valve *12.18* Pressure to which they are adjusted *220*

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"*

Mean dia. of boilers *12' 10 2/32* Length *10' 6"*

Material of shell plates *S.M. steel* Thickness *1 1/32*

Range of tensile strength *28-32 tons* Are the shell plates welded or flanged *flanged*

Descrip. of riveting: cir. seams *double*

long. seams *quadruple*

Diameter of rivet holes in long. seams *1 1/32* Pitch of rivets *17 3/16*

Lap of plates or width of butt straps *26 7/8*

Per centages of strength of longitudinal joint

rivets *101%*

Working pressure of shell by

rules *2.34*

Size of manhole in shell *11 7/8 x 15 3/4*

Size of compensating ring *9 7/8 x 1 3/16*

No. and Description of Furnaces in each

boiler *3 Morison's*

Material *S.M. steel* Outside diameter *36 25/32*

Length of plain part

top *4"*

Thickness of plates crown *4 3/4"*

Description of longitudinal joint *welded*

No. of strengthening rings *none*

Working pressure of furnace by the rules *225* Combustion chamber

plates: Material *S.M. steel*

Thickness: Sides *4 3/4"*

Back *4 3/4"*

Top *4 3/4"*

Bottom *3 1/2"*

Pitch of stays to ditto: Sides *7 1/2"* Back *7 1/4"*

Top *7 1/16*

If stays are fitted with nuts or riveted heads *none*

Working pressure by rules *244* Material of stays *S.M. steel* Diameter at

smallest part *1 1/32* Area supported by each stay *56.2*

Working pressure by rules *294* End plates in steam space: Material *S.M. steel* Thickness *1 1/32*

Pitch of stays *3 x 1/4*

How are stays secured *with nuts and washers*

Working pressure by rules *290* Material of stays *S.M. steel*

Diameter at smallest part *2 5/8"*

Area supported by each stay *192*

Working pressure by rules *280* Material of Front plates at bottom *S.M. steel*

Thickness *1 7/8"*

Material

Lower back plate *S.M. steel*

Thickness *1"*

Greatest pitch of stays *13" x 7 5/16*

Working pressure of plate by rules *296* Diameter of tubes *3 1/4"*

Pitch of tubes *4 5/16*

Material of tube plates *S.M. steel*

Thickness: Front *1 7/8"*

Back *2 9/32*

Mean pitch of stays *8 5/8"* Pitch across wide

water spaces *14"*

Working pressures by rules *224*

Girders to Chamber tops: Material *S.M. steel*

Depth and thickness of

girder at centre *9 7/16 x 2 3/32*

Length as per rule *30 3/4*

Distance apart *7 1/16*

Number and pitch of Stays in each *3 x 7 1/16*

Working pressure by rules *246* Superheater or Steam chest: how connected to boiler

Can the superheater be shut off and the boiler worked

separately

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

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

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

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.

Manufacturer *Georg W. Claussen.*

Dates of Survey while building

During progress of work in shops - -  
During erection on board vessel - - -  
Total No. of visits

*15/4. 2/5. 13/5. 24/5. 11/6. 13/6. 28/6. 14/7. 18/7. 4/8. 9/8. 24/8. 2/9. 6/9. 9/9. 15/9.*

*19/9. 22/9. 5/10. 16/10. 18/10. 26/10. 4/11. 1905.*

Is the approved plan of main boiler forwarded herewith *Yes*

" donkey " *Yes*

Lloyd's Register Foundation

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

*This boiler is built under special Survey of good material, tested as per rule and in compliance with the approved tracings.*

*The workmanship is good and the boiler has been tested by hydraulic pressure of 292 lb, found quite tight showing no alteration of form.*

*Under steam the boiler is tight and the safety valve lift freely at 22.0 lb.*

*For further particulars please see Report No. 1105 on Engine and Boiler of S.S. Hessen Yard No. 207.*

Certificate (if required) to be sent to

The amount of Entry Fee...	£	When applied for,
Special ...	£	<i>See Report on main boiler</i>
Donkey Boiler Fee ...	£	When received,
Travelling Expenses (if any) £		19

Committee's Minute

FRI, 10 NOV 1905

Assigned

*J. Thomsen*

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



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