

REPORT ON BOILERS

No. 1107

Rpt. 5.

Port of *Bremerhaven*

Received at London Office

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No. in Survey held at *Geestemünde* Date, first Survey *15th April 1905* Last Survey *4th November 1905*
 Reg. Book. 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*
 Indicated Horse Power *533* Owners *Norddeutscher Lloyd.* Port belonging to *Bremen*

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

(Letter for record *A*) Total Heating Surface of Boilers *16850* Is forced draft fitted *No* No. and Description of Boilers *one multitubular*
 Working Pressure *220x* Tested by hydraulic pressure to *292x* 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 *220x*
 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 29/32* 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%* plate *92.2%* 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 Morrison's* Material *S.M. steel* Outside diameter *36 25/32* Length of plain part top *4"* Thickness of plates crown *4 3/16* bottom *4 3/16*
 Description of longitudinal joint *welded* No. of strengthening rings *carry.* Working pressure of furnace by the rules *225* Combustion chamber plates: Material *S.M. steel* Thickness: Sides *4 3/16* Back *4 3/16* Top *4 3/16* Bottom *3 1/32* Pitch of stays to ditto: Sides *7 1/2"* Back *7 1/16"*
 Top *7 1/16* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *244x* Material of stays *S.M. steel* Diameter at smallest part *1 1/32* Area supported by each stay *56.2* Working pressure by rules *294x* End plates in steam space: Material *S.M. steel* Thickness *1 1/32*
 Pitch of stays *3x14* How are stays secured *with washers* Working pressure by rules *290x* Material of stays *S.M. steel* Diameter at smallest part *2 5/16*
 Area supported by each stay *192* Working pressure by rules *280x* Material of Front plates at bottom *S.M. steel* Thickness *1 7/16* Material Lower back plate *S.M. steel* Thickness *1"* Greatest pitch of stays *13" x 7 5/16* Working pressure of plate by rules *296x* Diameter of tubes *3 1/4*
 Pitch of tubes *4 5/16* Material of tube plates *S.M. steel* Thickness: Front *1 7/16* Back *2 9/32* Mean pitch of stays *8 5/8* Pitch across wide water spaces *14"* Working pressures by rules *224x* 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 *246x* 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.**
 Manufacturer *Schiffswerft und Maschinenfabrik. C. W. Clanner.*

Dates of Survey while building: During progress of work in shops -- *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.*
 During erection on board vessel --- *19/9, 24/9, 5/10, 16/10, 18/10, 26/10, 4/11, 1905.*
 Total No. of visits *23.*
 Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " *Yes*

009341-009349-0278

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 220 lb

For further particulars please see Report No. 1105 on Engines and Boilers of S.S. Hessen Yard No. 207.

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

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

J. Thomson

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

Committee's Minute

FRI, 10 NOV 1905

Assigned



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