

# REPORT ON BOILERS.

No. 430

THU. 5-FEB. 1920

Date of writing Report 15th Feb 1915 When handed in at Local Office

Received at London Office

Port of Bremen.

No. in Survey held at Bremen

Date, First Survey 14th May 1914 Last Survey 15th Feb 1915

Reg. Book. on the STEEL SC SA "SONNENFELS"

(Number of Visits 8) Gross 5848 Tons Net 3661

Master Built at Bremen By whom built A. G. Weser When built 1914-15  
 Engines made at Bremen By whom made A. G. Weser When made 1914-15  
 Boilers made at Bremen By whom made A. G. Weser When made 1914-15  
 Registered Horse Power 520 Owners Deutsche Dampfk. Ges. Hanseatic Port belonging to Bremen.

MULTITUBULAR BOILERS MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Friedr. Krupp, Essen

(Letter for record S) Total Heating Surface of Boilers 1076 sq ft Is forced draft fitted no No. and Description of Boilers 1 cylindrical multitubular Working Pressure 121 lbs Tested by hydraulic pressure to 182 lbs Date of test 22/9/14

No. of Certificate 87 Can each boiler be worked separately yes Area of fire grate in each boiler 45.3 sq ft No. and Description of safety valves to each boiler 2 spring loaded Area of each valve 7.4 sq ft Pressure to which they are adjusted 121 lbs

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 20" Mean dia. of boilers 144" Length 120"

Material of shell plates Steel Thickness .79" Range of tensile strength 28-33 tons Are the shell plates welded or flanged

Descrip. of riveting: cir. seams double long. seams triple Diameter of rivet holes in long. seams 1" Pitch of rivets 6.55"

Lap of plates or width of butt straps 14.6" Per centages of strength of longitudinal joint rivets 130 plate 85 Working pressure of shell by rules 137 lbs

Size of manhole in shell 14.8 x 15.8" Size of compensating ring 33.9 x 29.2" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 37.6" Length of plain part top 90" Thickness of plates crown .62 bottom .67

Description of longitudinal joint welded No. of strengthening rings Working pressure of furnace by the rules 143 lbs Combustion chamber plates: Material steel Thickness: Sides .52" Back .53" Top .57" Bottom .83" Pitch of stays to ditto: Sides 8.7 x 7.5" Back 8.9 x 7.8"

Top 8.7 x 7.9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 137 lbs Material of stays steel Diameter at smallest part 2.1-3.15" Area supported by each stay 68.6 sq in Working pressure by rules 136 lbs End plates in steam space: Material steel Thickness .79"

Pitch of stays 15.8 x 13.8 How are stays secured double nuts Working pressure by rules 129 lbs Material of stays steel Diameter at smallest part 2.25"

Area supported by each stay 216 sq in Working pressure by rules 138 lbs Material of Front plates at bottom steel Thickness .88" Material of cover back plate steel Thickness .71" Greatest pitch of stays 15.2 x 6.3" Working pressure of plate by rules 128 lbs Diameter of tubes 3.25"

Pitch of tubes 4.4 x 4.5" Material of tube plates steel Thickness: Front .88 Back .79 Mean pitch of stays 8.9" Pitch across wide water spaces 14.4" Working pressures by rules 175 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7.7 x 1.01" Length as per rule 27" Distance apart 7.9" Number and pitch of Stays in each 2-8.2"

Working pressure by rules 161 lbs 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

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

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

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

Diameter 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

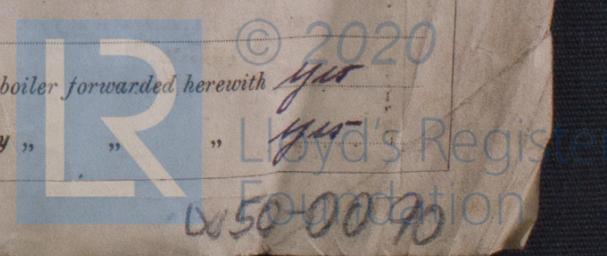
Thickness of water tubes

The foregoing is a correct description, Manufacturer.

Shipping. During progress of work in shops - 1914: May 14, June 5, July 23, Aug 22, Sept 15, 22  
 During erection on board vessel - Nov 19, 1915 - 15th February.  
 Total No. of visits 8

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " " " "



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

*See Report on Machinery.*

Certificates (if required) to be sent to  
 the Registrar of Shipping for Committee's Minutes.  
 (The Surveys are required not to write on or about the space for Committee's Minutes.)

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

*G. H. E. K. Am.*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Committee's Minute

TUE. AUG. 31 1920

Assigned

FRI. 17 DEC. 1920



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