

REPORT ON BOILERS.

No. 354
TUE. FEB. 3-1914Date of writing Report 22nd Jan 1914 When handed in at Local Office

Received at London Office

Port of

Bremen.

No. in Survey held at
Reg. Book.

Bremen

Date, First Survey

23rd April 1913

Last Survey

22nd Jan 1914

(Number of Visits

9

Gross 5854

Tons Net 3672

on the

steel sc sr "FRANKENFELS"

Master K. v. Thülen

Built at

Bremen

By whom built

Akt. Ges. Weser

When built 1914

Engines made at

Bremen

By whom made

Akt. Ges. Weser

When made

1914

Boilers made at

Bremen

By whom made

Akt. Ges. Weser

When made

1914

Registered Horse Power

520

Owners

Deutscher Dampf- fahrer Ges. Hanwa

Port belonging to

Bremen

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel

Friedr. Krupp, Essen
Futtermann & Co.,
Bismarckstr. 10, Hamburg.

(Letter for record

8

Total Heating Surface of Boilers

1026 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 3.10.13

No. of Certificate

70

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

2.4 sq in

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 in

Mean dia. of boilers

144 in

Length

120 in

Material of shell plates

I.M. steel

Thickness

.79 in

Range of tensile strength

28-33 tons

Are the shell plates welded or flanged

yes

Descrip. of riveting: cir. seams

double

long. seams

triple

Diameter of rivet holes in long. seams

1 in

Pitch of rivets

6.55 in

Lap of plates or width of butt straps

14.6 in

Per centages of strength of longitudinal joint

rivets 130

plate 85

Working pressure of shell by

rules 182 lbs

Size of manhole in shell

11.8 x 15.8 in

Size of compensating ring

33.9 x 29.2 in

No. and Description of Furnaces in each

boiler 3 plain

Material

I.M. steel

Outside diameter

32.6 in

Length of plain part

top 39 in

bottom 35 in

Thickness of plates

crown .62 in

bottom .62 in

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

143 lbs

Combustion chamber

plates: Material

I.M. steel

Thickness: Sides

.52 in

Back

.53 in

Top

.52 in

Bottom

.83 in

Pitch of stays to ditto: Sides

8.2 x 2.5 in

Back 8.8 x 2.1 in

Top 8.2 x 2.5 in

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

132 lbs

Material of stays

steel

Diameter at

smallest part

Area supported by each stay

68.60 sq in

Working pressure by rules

136 lbs

End plates in steam space: Material

I.M. steel

Thickness

.79 in

Pitch of stays

5.8 x 13.8 in

How are stays secured

double nuts

Working pressure by rules

129 lbs

Material of stays

steel

Diameter at smallest part

2.25 in

Area supported by each stay

216 sq in

Working pressure by rules

138 lbs

Material of Front plates at bottom

I.M. steel

Thickness

.88 in

Material of

Lower back plate

I.M. steel

Thickness

.71 in

Greatest pitch of stays

15.3 x 6.3 in

Working pressure of plate by rules

123 lbs

Diameter of tubes

3.25 in

Pitch of tubes

4.4 x 4.5 in

Material of tube plates

I.M. steel

Thickness: Front

.88 in

Back

.79 in

Mean pitch of stays

8.9 in

Pitch across wide

water spaces

14.4 in

Working pressures by rules

125 lbs

Girders to Chamber tops: Material

I.M. steel

Depth and thickness of

girder at centre

2.2 x 1.01 in

Length as per rule

22 in

Working pressure by rules

161 lbs

Superheater or Steam chest: how connected to boiler

yes

Can the superheater be shut off and the boiler worked

separately

yes

Diameter

yes

Length

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

yes

Diam. of rivet

yes

Pitch of rivets

yes

Working pressure of shell by rules

yes

Diameter of flue

yes

Material of flue plates

yes

Thickness

yes

If stiffened with rings

yes

Distance between rings

yes

Working pressure by rules

yes

End plates: Thickness

yes

How stayed

yes

Working pressure of end plates

yes

Area of safety valves to superheater

yes

Are they fitted with easing gear

yes

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,

ACTIEN-GESELLSCHAFT "WESER"

Manufacturer.

Dates of Survey while building

1913: April 23, May 12, 23, June 10, July 18, 23, Oct 3

1913: Dec 30, Jan 22

9

Is the approved plan of main boiler forwarded herewith

yes

"

"

" donkey "

"

"

yes

Lloyd's Register Foundation

W220-0112

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

See Report on Machinery.

Bremen Office.

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 .. £	<i>See</i>	:	When applied for.
Special	<i>Report</i>	:18.....
Donkey Boiler Fee £	<i>on</i>	:	When received,
Travelling Expenses (if any) £	<i>machinery</i>	:18.....

Committee's Minute

FRI. FEB. 6th 1914

Assigned

W. H. B. Kalm.

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



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Foundation