

Rpt. 5. 4

Hull Rpt No 31941  
REPORT ON BOILERS.

No. 31752

Date of writing Report

191

When handed in at Local Office

14/4/20

Port of

Received at London Office

FRI. APR 16 1920

No. in Survey held at

Reg. Book.

14828 on the *Hull* for S. TUG "GUARDSMAN."

Date, First Survey

9/3/20

Last Survey

14/4/1920

(Number of Visits

5+4

Gross

102

= 9 Tons

Net

6

Master

Built at

*Hull*

By whom built

*Walter S.B. & Co.*

When built

1905

Engines made at

By whom made

When made

1822.

Boilers made at

*Hull*

By whom made

*Walter S.B. & Co.*

When made

1920.

Registered Horse Power

Owners

*S. Gray & Co. Ltd.*

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel *SPENCER & SONS.*

(Letter for record

3

Total Heating Surface of Boilers

1050 *sq. ft.*

Is forced draft fitted

*No*

No. and Description of

Boilers

*one cyl. with single end.*

Working Pressure

140

Tested by hydraulic pressure to

280 *lb.*

Date of test

24/3/20

No. of Certificate

3422

Can each boiler be worked separately

Area of fire grate in each boiler

31.8 *sq. ft.*

No. and Description of

safety valves to each boiler

2 Spring loaded

Area of each valve

6.44 *sq. in.*

Pressure to which they are adjusted

145 *lb.*

Are they fitted with easing gear

*yes*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

*yes*

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-3"

Mean dia. of boilers

132 *in.*

Length

10'-0"

Material of shell plates

*Steel*

Thickness

3/4"

Range of tensile strength

28-32 *Tons*

Are the shell plates welded or flanged

*No*

Descrip. of riveting: cir. seams

*I.R.L.*

long. seams

*T.R.D.B.S.*

Diameter of rivet holes in long. seams

3/4"

Pitch of rivets

4 1/2"

Lap of plates or width of butt straps

1 1/2"

Per centages of strength of longitudinal joint

88.6 *%*

Working pressure of shell by

rules

140 *lb.*

Size of manhole in shell

16" x 12"

Size of compensating ring

3/4" x 7"

No. and Description of Furnaces in each

boiler

2 plain

Material

*Steel*

Outside diameter

3'-3 1/2"

Length of plain part

36'-7 1/2"

Thickness of plates

crown 3/4"

bottom 3/4"

Description of longitudinal joint

*Welded*

No. of strengthening rings

*1*

Working pressure of furnace by the rules

18 *lb.*

Combustion chamber

plates: Material

*Steel*

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

Pitch of stays to ditto: Sides

9 1/2" x 9 1/2"

Back

9 1/2" x 9 1/2"

Top 9 1/2" x 9 1/2" stays are fitted with nuts or riveted heads

*Nuts*

Working pressure by rules

140 *lb.*

Material of stays

smallest part

1/8"

Area supported by each stay

90 *sq. in.*

Working pressure by rules

175 *lb.*

End plates in steam space: Material

*Steel*

Thickness

1/8"

Pitch of stays

14" x 15"

How are stays secured

*IN & W.*

Working pressure by rules

154 *lb.*

Material of stays

*Steel*

Diameter at smallest part

3.03"

Area supported by each stay

210 *sq. in.*

Working pressure by rules

150 *lb.*

Material of Front plates at bottom

*Steel*

Thickness

1/8"

Material of

Lower back plate

*Steel*

Thickness

1/8"

Greatest pitch of stays

14" x 9 1/2"

Working pressure of plate by rules

157 *lb.*

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4"

Material of tube plates

*Steel*

Thickness: Front

1/8"

Back

1/8"

Mean pitch of stays

10.6"

Pitch across wide

water spaces

14"

Working pressures by rules

235 *WWS*

Girders to Chamber tops: Material

*Steel*

Depth and thickness of

girder at centre

7 1/2" x 1 1/2"

Length as per rule

28"

Distance apart

9 1/2"

Number and pitch of Stays in each

2 @ 9 1/2"

Working pressure by rules

178 *lb.*

Superheater or Steam chest: how connected to boiler

*yes*

Can the superheater be shut off and the boiler worked

*yes*

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

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,

FOR CHARLES D. HOLMES &amp; CO. LTD. Manufacturer.

Dates of Survey while building  
During progress of work in shops - -  
During erection on board vessel - -  
Total No. of visits1920 - Mar 9. 12. 19. 24. Apr 14.  
Apr 29. May 27 Jun 1. 7  
5 + 4 = 9.

Is the approved plan of main boiler forwarded herewith

*yes*

" " " donkey " "

W403-0130

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GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey & the materials & workmanship are good. On completion it was subjected to a hydraulic test of 280 lbs. and was found tight at that pressure.

The boiler is intended for the S. T. G. GUARDSMAN of this port & will be fitted on board in a few months time until then it will be stored under cover.

The boiler is eligible in my opinion to have the record + N.B. with date when the boiler is fitted and secured on board the vessel.

This boiler has been securely fitted in the ship, and the safety valves adjusted to pressure noted on this report.

The Boiler is now eligible in my opinion to have the record + NB-5-20 marked in Red in the Society's Register Book.

6 see last date of visit. Over.

It is submitted that  
this vessel is eligible for  
THE RECORD. + NB 6. 20. Subject Colthe  
Safety valves being readjusted for a  
working pressure of 130 lbs. at the next  
boiler cleaning as arranged (see letter 9/8/20)

WP. 130 lbs. tabulated

H.  
14/8/20

The amount of Entry Fee .. £ :  
Special .. £ 3-10-0  
Donkey Boiler Fee .. £ 2 : 2 : 0  
FITTING ON BOARD  
Travelling Expenses (if any) £ : 13-10-0

When applied for  
15/4/20  
When received  
28/4/20

H. J. Sutherland  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute AUG. 17 1920

Assigned

FRI. AUG. 13 1920

FRI. DEC. 31 1920

+ NB 6. 20 Subject



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