

# REPORT ON BOILERS.

No. 42777

Received at London Office

WED. 6 JUN 1923

of writing Report

102

When handed in at Local Office

4 6 1923

Port of

Glasgow.

in Survey held at

Clydebank

Date, First Survey

26 March 1919

Last Survey

30 May 1923

Book.

on the

T/S "FRANCONIA"

(Number of Visits

151

Gross

20158

Net

12185

ster

Built at

Clydebank

By whom built

John Brown & Co.

Yard No.

492

When built

1923

ines made at

Clydebank

By whom made

John Brown & Co.

Engine No.

492

When made

1923

ilers made at

Clydebank

By whom made

John Brown & Co.

Boiler No.

492

When made

1923

inal Horse Power

Owners

Cunard S.S. Co.

Port belonging to

Liverpool

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D. Colville & Sons

(Letter for Record

\$ r

tal Heating Surface of Boilers

9721

Is forced draught fitted

Yes

Coal or Oil fired

oil

and Description of Boilers

3 single end cylindrical multitubular

Working Pressure

220 lbs.

sted by hydraulic pressure to

385 lbs.

Date of test

11 June 1920

No. of Certificate

15325

Can each boiler be worked separately

Yes

ea of Firegrate in each Boiler

83 sq. ft.

No. and Description of safety valves to each boiler

2 Spring loaded

ea of each set of valves per boiler

per Rule

as fitted

19.24

Pressure to which they are adjusted

225 lbs.

Are they fitted with easing gear

Yes

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

Yes

allest distance between boilers or uptakes and bunkers or woodwork

Well clear

Is oil fuel carried in the double bottom under boilers

Yes

allest distance between shell of boiler and tank top plating

16"

Is the bottom of the boiler insulated

Yes

argest internal dia. of boilers

17'6"

Length

11'6"

Shell plates: Material

Steel

Tensile strength

30/34 tons

ickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

inter.

3.95"

g. seams

Double

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

10.5"

centage of strength of circ. end seams

plate

58.0

rivets

50.5

Percentage of strength of circ. intermediate seam

plate

58.0

rivets

50.5

centage of strength of longitudinal joint

plate

84.2

rivets

92.03

combined

86.2

Working pressure of shell by Rules

221 lbs.

ickness of butt straps

outer

1 1/2"

inner

1 1/2"

No. and Description of Furnaces in each Boiler

4 Morrison Section

aterial

Steel

Tensile strength

26/30 tons

Smallest outside diameter

45 5/8"

ngth of plain part

top

bottom

Thickness of plates

crown

1/16"

bottom

1/16"

Description of longitudinal joint

Welded

mensions of stiffening rings on furnace or c.c. bottom

Yes

Working pressure of furnace by Rules

221 lbs.

d plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1/4"

Pitch of stays

17 7/8" x 18"

no are stays secured

Nuts

Working pressure by Rules

230 lbs.

be plates: Material

front

Steel

back

Steel

Tensile strength

26/30 tons

26/30 tons

Thickness

1/16"

Working pressure

front

318 lbs.

back

319 lbs.

an pitch of stay tubes in nests

10"

Pitch across wide water spaces

13 3/4"

Working pressure

front

318 lbs.

back

319 lbs.

orders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

centre

9" x 1 1/2"

Length as per Rule

30 1/2"

Distance apart

8"

No. and pitch of stays

each

2 of 9 7/8"

Working pressure by Rules

290 lbs.

Combustion chamber plates: Material

Steel

nsile strength

26/30 tons

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

13/16"

ch of stays to ditto: Sides

8" x 9 7/8"

Back

7 7/8" x 10"

Top

8" x 9 7/8"

Are stays fitted with nuts or riveted over nuts inside, riveted at shell.

orking pressure by Rules

224 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

ickness

1"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

29/32"

ch of stays at wide water space

13 3/4"

Are stays fitted with nuts or riveted over margin nuts, inside riveted.

orking Pressure

360 lbs.

Main stays: Material

Steel

Tensile strength

28/32 tons

iameter

At body of stay,

3"

Over threads

3 1/4"

No. of threads per inch

6

Area supported by each stay

317 sq. in.

orking pressure by Rules

253 lbs.

Screw stays: Material

Iron

Tensile strength

21 1/2 tons

iameter

At turned off part,

1 3/4"

Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

79 sq. in.

002241-002248-002

Lloyd's Register

Foundation



REF

Date of writing

No. in Survey Reg. Book.

49028 on the

Built at

Owners

Electric Light

System of Dis

Pressure of sup

Direct or Alter

If alternating cu

Has the Automa

Generators, do

are they over com

Where more than

series with each sh

Are all terminals

or short circuited

Position of Gen

is the ventilation

if situated near

are their axis of

Earthing, are th

their respective ge

Main Switch Bo

a fuse on each insu

Switchboards, a

are they protected f

woodwork or other

are they constructed

permanently high

insulated from the

frame effectively ea

YES

bars YES

Main Switchgear

1-D.P. SWITCH

EACH MAIN

Instruments on

Earth Testing, s

ON EARTHIN

Switches, Circui

Section and Dis

Working pressure by Rules 226 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8"  
No. of threads per inch 9 Area supported by each stay 93" Working pressure by Rules 225 lbs  
Tubes: Material iron External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 3/8" 5/16" 1/4" No. of threads per inch 9  
Pitch of tubes 4" x 4" Working pressure by Rules 275 lbs Manhole compensation: Size of opening in  
shell plate 21" x 17" Section of compensating ring 40" x 36 1/2" x 1 2/32" No. of rivets and diameter of rivet holes 40 of 1 2/32"  
Outer row rivet pitch at ends 1 1/2" Depth of flange if manhole flanged 4 1/2" Steam Dome: Material iron  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets  
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of  
stays Inner radius of crown Working pressure by Rules  
How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell

Type of Superheater

none The superheaters have been removed from these boilers.

Manufacturers of

Tubes

Steel castings

Number of elements

Material of tubes

Internal diameter and thickness of tubes

Material of headers

Tensile strength

Thickness

Can the superheater be shut off and

the boiler be worked separately

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Area of each safety valve

Are the safety valves fitted with easing gear

Working pressure as per

Rules

Pressure to which the safety valves are adjusted

Hydraulic test pressure:

tubes

castings

and after assembly in place

Are drain cocks or valves fitted

to free the superheater from water where necessary

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description, Limited

John Brown & Company, Limited

Manufacturers

Dates of Survey { During progress of work in shops - - }  
while building { During erection on board vessel - - }

See accompanying

Are the approved plans of boiler and superheater forwarded herewith See accompanying  
(If not state date of approval.)

Machinery report

Total No. of visits 151

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

These boilers have been built under survey and in accordance with the Rules and approved plan, they have been satisfactorily fitted on board.

See also 1st Entry Report.

Survey Fee ... £ See 1st Entry When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

A. Campbell

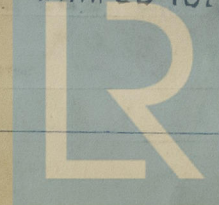
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 5-JUN 1923

Assigned See accompanying machinery report.

FRI JUN 29 1923

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