

# REPORT ON BOILERS.

No. 10483

Received at London Office

13 OCT 1930

Writing Report

192

When handed in at Local Office

10<sup>th</sup> Oct. 1930

Port of

Belfast.

Survey held at

Belfast.

Date, First Survey

Last Survey

192

33 on the *Wm. S. S. "TWEEDBANK"*

(Number of Visits)

Gross 5630.

Tons Net 3440.

Built at Belfast.

By whom built

Workman, blank dtd.

Yard No. 513.

When built 1930.

nes made at Belfast.

By whom made

Workman, blank (1928) dtd.

Engine No. 513.

When made 1930.

rs made at Belfast.

By whom made

Workman, blank (1928) dtd.

Boiler No. 513.

When made 1930.

inal Horse Power 1246.

Owners

Bank line dtd.

Port belonging to

Belfast.

## MULTITUBULAR BOILERS\$ MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Baldwin dtd.

(Letter for Record

S

al Heating Surface of Boilers

1607.

Is forced draught fitted

110.

Coal or Oil fired

oil

and Description of Boilers

One S.E. Multitubular.

Working Pressure

120 lbs.

ed by hydraulic pressure to 230 lbs.

Date of test

25/4/30.

No. of Certificate

948.

Can each boiler be worked separately

✓

a of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

Two Cockburns High Lift.

a of each set of valves per boiler

per Rule 8.90"

as fitted 9.80"

Pressure to which they are adjusted 120 lbs.

Are they fitted with easing gear

yes.

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

No main boilers.

allest distance between boilers or uptakes and bunkers or woodwork

24"

Is oil fuel carried in the double bottom under boilers

yes.

allest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

yes.

gest internal dia. of boilers

13'-0"

Length

10'-6"

Shell plates: Material

Steel.

Tensile strength

28/32.

ckness

25"

Are the shell plates welded or flanged

110.

Description of riveting: circ. seams

end

Double.

r. seams

Double riveted. Double butt straps.

Diameter of rivet holes in

circ. seams

1 1/32"

Pitch of rivets

3.5181"

centage of strength of circ. end seams

plate

70.5.

rievts

50.2.

Percentage of strength of circ. intermediate seam

plate

✓

centage of strength of longitudinal joint

plate

81.3.

rievts

84.7.

combined

90.5.

Working pressure of shell by Rules

122 lbs.

ickness of butt straps

outer

21"

inner

25"

No. and Description of Furnaces in each Boiler

Three Deighton.

aterial

Steel.

Tensile strength

26/30.

Smallest outside diameter

37 7/8"

ngth of plain part

top

✓

bottom

✓

Thickness of plates

crown

7/16"

bottom

7/16"

Description of longitudinal joint

Welded.

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

✓

Working pressure of furnace by Rules

164 lbs.

d plates in steam space: Material

Steel.

Tensile strength

26/30.

Thickness

1"

Pitch of stays 18 3/4" x 18"

ow are stays secured

Double nuts.

Working pressure by Rules

136 lbs.

be plates: Material

front

Steel.

back

Tensile strength

26/30.

Thickness

7/8"

3/4"

an pitch of stay tubes in nests

14"

Pitch across wide water spaces

14"

Working pressure

front 141 lbs.  
back 125 lbs.

rders to combustion chamber tops: Material

Steel.

Tensile strength

28/32.

Depth and thickness of girder

centre

7 x 1 1/2"

Length as per Rule

31 3/16"

Distance apart

10"

No. and pitch of stays

each

2-9"

Working pressure by Rules

128.7 lbs.

Combustion chamber plates: Material

Steel.

nsile strength

26/30.

Thickness: Sides

19/32"

Back

9/16"

Top

19/32"

Bottom

19/32"

itch of stays to ditto: Sides

9 1/2" x 9"

Back

9 1/2" x 9 1/4"

Top

10 x 9"

Are stays fitted with nuts or riveted over

nuts.

orking pressure by Rules

134 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30.

ickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30.

Thickness

7/16"

itch of stays at wide water space

13 7/8" x 9 1/4"

Are stays fitted with nuts or riveted over

nuts.

orking Pressure

152 lbs.

Main stays: Material

Steel

Tensile strength

28/32.

iameter

At body of stay,

2 3/4"

No. of threads per inch

6.

Area supported by each stay

337.50"

orking pressure by Rules

164 lbs.

Screw stays: Material

Steel

Tensile strength

26/30.

iameter

At turned off part,

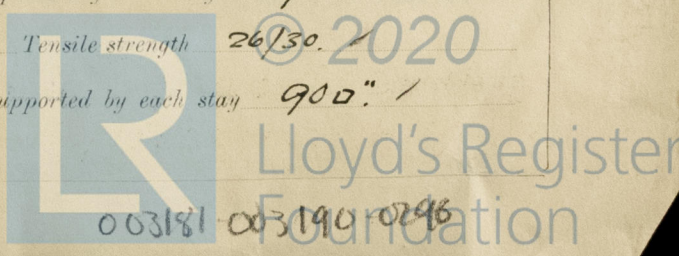
1 1/2"

No. of threads per inch

9

Area supported by each stay

900"





Working pressure by Rules 139 lbs. Are the stays drilled at the outer ends No. Margin stays: Diameter <sup>At turned off part,</sup> 1 5/8" or <sup>Over threads</sup> 1 5/8"

No. of threads per inch 9 Area supported by each stay 104.6 sq. Working pressure by Rules 145 lbs.

Tubes: Material Iron External diameter <sup>Plain</sup> 3" <sup>Stay</sup> 3" Thickness 8 S.H.G. 5/16" No. of threads per inch 9

Pitch of tubes 4 1/4" Working pressure by Rules 250 lbs. Manhole compensation: Size of open shell plate (16x12") 19"x15" Section of compensating ring 28 5/16" x 31" x 1 3/16" No. of rivets and diameter of rivet holes 44 - 3/32"

Outer row rivet pitch at ends 5 3/16" Depth of flange if manhole flanged 3 1/4" Steam Dome: Material

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint <sup>Plate</sup> <sup>Rivets</sup>

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of rivets

Inner radius of crown Working pressure by Rules

How connected to shell Size of doubling plate under dome Diameter of rivet holes and of rivets in outer row in dome connection to shell

Type of Superheater

Number of elements Material of tubes Manufacturers of Tubes Steel castings

Material of headers Tensile strength Internal diameter and thickness of tubes

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

Area of each safety valve Are the safety valves fitted with easing gear Working pressure

Rules Pressure to which the safety valves are adjusted Hydraulic test pressure

tubes, castings and after assembly in place Are drain cocks or valves

to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,  
**pro WORKMAN CLARK (1928) LIMITED,**  
J. Cunningham Secretary.

Dates of Survey <sup>During progress of work in shops - -</sup> <sup>while building</sup> <sup>During erection on board vessel - - -</sup>

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

Total No. of visits

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

*This boiler was constructed under special survey to an approved design. The materials and workmanship are good. The boiler was subjected to hydraulic test in accordance with the Rules and was efficiently fastened on board the vessel. The safety valves were adjusted to 120 lbs. under steam.*

Survey Fee ... £ 10 : 14 : 0 When applied for, 10<sup>th</sup> Oct 30

Travelling Expenses (if any) £ : : When received, 16.10.30

John K. Williams  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 17 OCT 1930

Assigned See F.E. Rpt.