

REPORT ON BOILERS.

No. 10,368

Received at London Office

17 MAY 1930

Date of writing Report

192

When handed in at Local Office

16th May

1930

Port of *Belfast.*No. in Survey held at
Reg. Book.*Belfast.*

Date, First Survey

Last Survey

192

on the *Sc. MV. "IRISBANK."*

(Number of Visits)

Gross

Tons

Net

Master

Built at

Belfast.

By whom built

Workman, Black (1928) Ltd.

Yard No.

When built

*510.**1930.*

Engines made at

Belfast.

By whom made

Workman, Black (1928) Ltd.

Engine No.

When made

*510.**1930.*

Boilers made at

Belfast.

By whom made

Workman, Black (1928) Ltd.

Boiler No.

When made

*510**1930.*

Nominal Horse Power

1246.

Owners

Bank Line Ltd.

Port belonging to

Belfast.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Baldwins Ltd.

(Letter for Record)

Total Heating Surface of Boilers

1607.

Is forced draught fitted

No.

Coal or Oil fired

oil

No. and Description of Boiler

One, S.E. Mult

Working Pressure

120 lbs.

Tested by hydraulic pressure to

230 lbs.

Date of test

9/12/29.

No. of Certificate

941

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

Two, Cockburn high lift.

Area of each set of valves per boiler

per Rule 8.9"
as fitted 9.8"

Pressure to which they are adjusted

120 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 main brickers.

Smallest distance between boilers or uptakes and bunkers or woodwork

24"

Is oil fuel carried in the double bottom under boilers

yes.

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

yes.

Largest internal dia. of boilers

13'-0"

Length

10'-6"

Shell plates: Material

Steel.

Tensile strength

28/32.

Thickness

25/32.

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end Double.

long. seams

Double riveted. Double butt straps.

Diameter of rivet holes in

circ. seams 1 1/8"
long. seams 3/16"

Pitch of rivets

5-5 1/8"
5 3/16"

Percentage of strength of circ. end seams

plate 70.5.
rivets 50.2.

Percentage of strength of circ. intermediate seam

plate ✓
rivets ✓

Percentage of strength of longitudinal joint

plate 81.3.
rivets 84.7.
combined 90.5.

Working pressure of shell by Rules

122 lbs.

Thickness of butt straps

outer 2 1/2"
inner 2 5/8"

No. and Description of Furnaces in each Boiler

Three - Deighton.

Material

Steel.

Tensile strength

26/30

Smallest outside diameter

37 1/2"

Length of plain part

top ✓
bottom ✓

Thickness of plates

crown 7/16"
bottom 7/16"

Description of longitudinal joint

Welded.

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

✓

Working pressure of furnace by Rules

164 lbs.

End plates in steam space: Material

Steel.

Tensile strength

26/30.

Thickness

1"

Pitch of stays

18 3/4" x 18"

How are stays secured

Double nuts.

Working pressure by Rules

136 lbs.

Tube plates: Material

front } Steel.
back }

Tensile strength

26/30.

Thickness

3/8"
3/4"

Mean pitch of stay tubes in nests

14"

Pitch across wide water spaces

14"

Working pressure

front 141.
back 250.3.

Girders to combustion chamber tops: Material

Steel.

Tensile strength

28/32.

Depth and thickness of girder

at centre

7" x 1 1/2"

Length as per Rule

31 3/16"

Distance apart

10"

No. and pitch of stays

in each

2-9"

Working pressure by Rules

128.7 lbs.

Combustion chamber plates: Material

Steel.

Tensile strength

26/30.

Thickness: Sides

1 1/2"
3/2"

Back

9/16"

Top

1 1/2"
3/2"

Bottom

1 1/2"
3/2"

Pitch 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.

Working pressure by Rules

134 lbs.

Front plate at bottom: Material

Steel.

Tensile strength

26/30.

Thickness

1 1/8"

Lower back plate: Material

Steel.

Tensile strength

26/30.

Thickness

1 1/8"
1 1/16"

Pitch of stays at wide water space

13 7/8" x 9 1/4"

Are stays fitted with nuts or riveted over

nuts.

Working Pressure

152 lbs.

Main stays: Material

Steel.

Tensile strength

28/32.

Diameter

At body of stay, 2 3/4"
Over threads

No. of threads per inch

six

Area supported by each stay

337.5 sq. in.

Working pressure by Rules

164 lbs.

Screw stays: Material

Steel.

Tensile strength

26/30

Diameter

At turned off part, 1 1/2"
Over threads

No. of threads per inch

9

Area supported by each stay

90 sq. in.

002938-002946-0085

Working pressure by Rules *139 lbs.* Are the stays drilled at the outer ends *No.* Margin stays: Diameter { At turned off part, *1 5/8"*
 No. of threads per inch *9.* Area supported by each stay *104.6 sq. in.* Working pressure by Rules *145 lbs.*
 Tubes: Material *Mon.* External diameter { Plain *3"* Thickness { *8 SWG.* No. of threads per inch *9*
 Pitch of tubes *4 1/4"* Working pressure by Rules *250 lbs.* Manhole compensation: Size of opening in
 shell plate *16" x 12" 19 x 15* Section of compensating ring *28 15/16 x 31 x 1 3/4"* No. of rivets and diameter of rivet holes *44 - 31/32"*
 Outer row rivet pitch at ends *5 3/4"* 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 { Plate
 Internal diameter Working pressure by Rules Thickness of crown Rivets 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
 Number of elements Material of tubes Manufacturers of { Tubes
 Material of headers Tensile strength Steel castings 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
 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,
 FOR WORKMAN CLARK (1923) LIMITED.

J. Birmingham Secretary Manufacturer.

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

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. sq. in. under steam.

Survey Fee ... £ *10 : 14 : 0*

When applied for, *12th May 1930*

Travelling Expenses (if any) £ : :

When received, *27.5.30*

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

Committee's Minute

FRI, 28 MAY 1930

Assigned

See J.E. Rpt.



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