

REPORT ON BOILERS.

No. 10,276

Received at London Office -2 DEC 1929

Date of writing Report

192

When handed in at Local Office

30 Nov

1929

Port of Belfast

No. in
Ref. Book.

Survey held at Belfast

Date, First Survey

See first entry machinery report

Last Survey

192

36736 on the

S.S. "TRENTBANK"

(Number of Visits

Gross

Tons

Net

Master

Built at Belfast

By whom built

Jimmie Workman Clark (1928) Ltd. and No. 507

When built 1929

Engines made at Belfast

By whom made

Jimmie Workman Clark (1928) Ltd. Engine No. 507

When made 1929

Boilers made at Belfast

By whom made

Jimmie Workman Clark (1928) Ltd. Boiler No. 507

When made 1929

Nominal Horse Power 565

Owners

Bank Line, Ltd.

Port belonging to

Belfast

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Jimmie David Colville & Sons, Ltd. & J. Dunlop & Co.

(Letter for Record

S

Total Heating Surface of Boilers

8112 sq

Is forced draught fitted

yes

Coal or Oil fired

oil

No. and Description of Boilers

3 S.C. Cylindrical 3 S.B.

Working Pressure

260 lbs.

Tested by hydraulic pressure to

440 lbs.

Date of test

24.5.29

No. of Certificate

937

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

71.5 sq

No. and Description of safety valves to each boiler

2-2 1/4" P. Steel Improved High Lift

Area of each set of valves per boiler

{per Rule 1/2 of 14.74

as fitted 7.952

Pressure to which they are adjusted

260 lbs.

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

18" at corner

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

15'-6"

Length

11'-9"

Shell plates: Material

Steel

Tensile strength

31-35 Tons

Thickness

1 1/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

{end D.R

long. seams

T.R. Butt strap

Diameter of rivet holes in

{circ. seams 1 1/4"

{long. seams 1 1/4"

Pitch of rivets

{4.094"

{10 7/8"

Percentage of strength of circ. end seams

{plate 58.7

{rivets 48.4

Percentage of strength of circ. intermediate seam

{plate

{rivets

Percentage of strength of longitudinal joint

{plate 84.48

{rivets 85.69

{combined 86.1

Working pressure of shell by Rules

263.68 lbs.

Thickness of butt straps

{outer 19/32"

{inner 13/32"

No. and Description of Furnaces in each Boiler

Four Dighton 4 C.F.

Material

Steel

Tensile strength

26-30 Tons

Smallest outside diameter

39 1/32"

Length of plain part

{top

{bottom

Thickness of plates

{crown 45/64"

{bottom 45/64"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

261.8 lbs.

End plates in steam space: Material

Steel

Tensile strength

26-30 Tons

Thickness

1 3/8"

Pitch of stays

21 3/4" x 16 1/2"

How are stays secured

D.R. & W

Working pressure by Rules

270 lbs.

Tube plates: Material

{front

{back

Steel

Tensile strength

26-30 Tons

Thickness

1 1/16"

Mean pitch of stay tubes in nests

9 1/4"

Pitch across wide water spaces

13 1/2"

Working pressure

{front 294.5 lbs.

{back 277 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 Tons

Depth and thickness of girder

at centre

10 3/4" x 1 1/2"

Length as per Rule

34 15/32"

Distance apart

8 1/4"

No. and pitch of stays

in each

3-8"

Working pressure by Rules

273.6 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 Tons

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

7/8"

Pitch of stays to ditto: Sides

8 1/4" x 8 3/8"

Back

8 1/4" x 8 1/4"

Top

8 1/4" x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

263 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26-30 Tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26-30 Tons

Thickness

3 1/32"

Pitch of stays at wide water space

14" x 8 1/4"

14 3/4" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

274 lbs.

Main stays: Material

Steel

Tensile strength

28-32 Tons

Diameter

{At body of stay,

{or

{Over threads

3 1/2"

No. of threads per inch

six

Area supported by each stay

358.875 sq

Working pressure by Rules

263.7 lbs.

Screw stays: Material

Steel

Tensile strength

26-30 Tons

Diameter

{At turned off part,

{or

{Over threads

1 3/4"-1 5/8"

No. of threads per inch

nine

Area supported by each stay

69.090 sq

51.560 sq

Working pressure by Rules 266 lb. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 2" 17/8"
No. of threads per inch nine Area supported by each stay 93.24 sq" Working pressure by Rules 263.7 lb.
Tubes: Material iron External diameter { Plain 2 1/2" Thickness { 5/8" No. of threads per inch nine
Pitch of tubes 3 3/4" - 3 5/8" Working pressure by Rules Plain 300 Stay 302.3 Manhole compensation: Size of opening in
shell plate 15 1/4" x 19 1/4" Section of compensating ring 36" - 37 1/4" x 1 5/8" No. of rivets and diameter of rivet holes 36 1 1/16"
Outer row rivet pitch at ends 10 7/8" 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 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 Sugden Uptake Manufacturers of { Tubes Steel castings
Number of elements 60 each set Material of tubes cast steel Internal diameter and thickness of tubes 14 OD 10 WG
Material of headers mild steel Tensile strength Thickness Can the superheater be shut off and
the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes
Area of each safety valve 3-14 Are the safety valves fitted with easing gear yes Working pressure as per
Rules Pressure to which the safety valves are adjusted 260 lb. Hydraulic test pressure:
tubes, castings and after assembly in place 780 lb. Are drain cocks or valves fitted
to free the superheater from water where necessary valves
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 (1928) LIMITED, Manufacturer.

J. Cunningham Secretary
5/10/28

Dates of Survey { During progress of work in shops - - }
while building { During erection on 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.)

These boilers were constructed under Special Survey to an approved design. The materials and workmanship are good. They were subjected to hydraulic test in accordance with the rules and were efficiently fastened on board the vessel. The safety valves were adjusted to 260 lbs. under steam.

Survey Fee ... £ See machinery report : : When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

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

Committee's Minute FRI. 6 DEC 1929

Assigned

See Supt. attached



© 2019

Lloyd's Register
Foundation