

Rpt. 5a.

REPORT ON BOILERS.

No. 10300

Received at London Office

22 JAN 1930

Date of writing Report

192

When handed in at Local Office 21-1-1930

Port of

Belfast

included in first entry report

No. in Survey held at

Belfast

Date, First Survey

Last Survey

192

Reg. Book.

(Number of Visits)

Gross
Tons
Net

26802, on the Steel Sc. "LINDENBANK."

Master

Built at

Belfast

By whom built

James Workman Clark (1928) Ltd. No. 509

When built 1930

Engines made at

Belfast

By whom made

James Workman Clark (1928) Ltd.

Engine No. 509

When made 1930

Boilers made at

Belfast

By whom made

James Workman Clark (1928) Ltd.

Boiler No. 509

When made 1930

Nominal Horse Power

565

Owners

Bank Line, Ltd.

Port belonging to

Belfast

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel James Daniel White & 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

Three S.E. Cylindrical

Working Pressure 260 lbs.

Tested by hydraulic pressure to

440 lbs

Date of test 29-8-29

No. of Certificate

939

Can each boiler be worked separately

Area of Firegrate in each Boiler

71.5 sq

No. and Description of safety valves to each boiler

2-2 1/4" Steel Improved High Lift

Area of each set of valves per boiler

per Rule 1/2 of 14.74

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 43/64"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R.

long. seams

T.R. Butt Straps

Diameter of rivet holes in

circ. seams 1 1/16"

Pitch of rivets

4.094"

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 1 9/32"

inner 1 3/32"

No. and Description of Furnaces in each Boiler

Four Right 4 C.F.

Material

Steel

Tensile strength

26-30 Tons

Smallest outside diameter

39 13/32"

Length of plain part

top

bottom

Thickness of plates

crown 45/64"

Description of longitudinal joint

weld

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

yes

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.N.W.

Working pressure by Rules 270 lbs.

Tube plates: Material

front Steel

back Steel

Tensile strength

26-30 Tons

Thickness

13/16"

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

31/32"

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

11

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

13 1/4" 15/8"

No. of threads per inch

11

Area supported by each stay

69.09 sq

Shipping.

Lloyd's Register
Foundation

W473-0281

Working pressure by Rules 266 lb. Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 2" 17/8"
 No. of threads per inch none Area supported by each stay 93.140" Working pressure by Rules 263.7 lb.
 Tubes: Material Steel External diameter ^{Plain} 2 1/2" ^{Stay} 2 1/2" Thickness ^{11.8 w.g.} 3/8" 5/16" No. of threads per inch none
 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" - 19 1/4" Section of compensating ring 36 x 37 1/16 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 Superheated Uptake 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 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 (1923) LIMITED.
 Manufacturer.

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

Are the approved plans of boiler and superheater forwarded with ✓
 (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 lb. under steam.

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

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

Committee's Minute

FRI. 24 JAN 1930

Assigned

See other report



© 2019

Lloyd's Register
 Foundation