

REPORT ON WATER TUBE BOILERS.

No. 49482

Received at London Office

-7 AUG 1929

Date of Writing Report

191

When handed in at Local Office

2/1/29

1929

Port of Glasgow

No. in
Reg. Bk.

Survey held at

Renfrew

Date, First Survey

19.9.29

Last Survey

14 June 1929

on the

BOILER No. 61239 Bucket Sledge S/S "Otakou"

Number of Visits

35

Gross

1933

Tons

Net

995

Master

Built at

Paisley

By whom built

Fleming & Ferguson Ltd

When built

1929

Engines made at

Paisley

By whom made

Fleming & Ferguson Ltd

When made

1929

Boilers made at

Renfrew

By whom made

Babcock & Wilcox Ltd

When made

1929

Registered Horse Power

279

Owners

Otago Harbour Board

Port belonging to

Dunedin

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D. Colville & Sons Ltd

(Letter for Record

S

Date of Approval of plan

20.9.29

19.10.28

Number and Description of Type

of Boilers

2 of Babcock & Wilcox type

Working Pressure

130

Tested by Hydraulic Pressure to

245

Date of Test

4.6.29

No. of Certificate

18322

Can each boiler be worked separately

yes

Total Heating Surface of Boilers

5250

Is forced draught fitted

yes (induced)

Area of fire grate (coal) in each Boiler

Total grate area of boilers in vessel including

Main and Auxiliary

yes

No. and type of burners (oil) in each boiler

3 off. Babcock & Wilcox type

No. and description of safety valves on

each boiler

1 Pair 3" dia. from H.L. Cochran

Area of each valve

7.07 sq. inches

Pressure to which they are adjusted

130 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

between and bunkers

8'-0"

Height of Boiler

14'-6"

Width and Length

12'-5" - 15'-2"

Steam Drums:—

Number in each boiler

One

Inside diameter

4'-0"

Material of plates

Steel

Thickness

7/16" T.P. 1/16"

Range of Tensile Strength

28-32 tons

Are drum shell plates welded or flanged

no

Description of riveting

Cir. seams

D.R. Lap

long. seams

D.R. D.B.S.

Diameter of rivet holes in long. seams

2 5/32"

Pitch of Rivets

3.102"

Lap of plate or width of butt straps

8 1/2" MEAN

Thickness of straps

7/16"

Percentage strength of long. joint:—Plate

75

Rivet

112

Diameter of tube holes in drum

4 3/4"

Pitch of tube holes

7"

Percentage strength of shell in way of tubes

97

If Drum has a flat side state method of staying

yes

Depth and thickness of girders at centre

(if fitted)

yes

Distance apart

yes

Number and pitch of stays in each

yes

Working pressure

by rules

yes

Steam Drum Heads or Ends:—

Material

Steel

Thickness

13/16"

Radius or how stayed

3'-6"

Size of Manhole or Handhole

15" x 11"

MVD

Water Drums:—

Number in each boiler

One

Inside

Diameter

6" x 6"

Material of plates

Steel

Thickness

3/4"

Range of tensile strength

24-28 tons

Are drum shell plates welded

or flanged

Welded

Description of riveting:—

Cir. seams

yes

long. seams

yes

Diameter of Rivet Holes in

long. seams

yes

Pitch of rivets

yes

Lap of plates or width of butt straps

yes

Thickness of straps

yes

Percentage strength of long. joint:—Plate

yes

Rivet

yes

Diameter of tube holes in drum

4 3/4"

Pitch of tube holes

7"

Percentage strength of drum shell in way of tubes

42.2

MVD

Water

Drum Heads or Ends:—

Material

Steel

Thickness

3/4"

Radius or how stayed

3'-6"

Radius or how stayed

Flat

Size of manhole or handhole

yes

Headers or Sections:—

Number

18 Pairs per Boiler

Material

Steel

Thickness

7/16"

Tested by Hydraulic Pressure to

245 lbs

Material of Stays

yes

Area at smallest part

yes

Area supported by each stay

yes

Working Pressure by Rules

324 lbs

Tubes:—

Diameter

4" 1/16"

Thickness

4" 1/16"

1/16"

9 L.S.G.

10 L.S.G.

Number

54 @ 4"

558 @ 1 1/16"

Steam Dome or Collector:—

Description of Joint to Shell

yes

Percentage strength of Joint

yes

Diameter

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

yes

Diameter of Rivet Holes

yes

Pitch of Rivets

yes

Working Pressure of shell

yes

by Rules

yes

Crown or End Plates:—

Material

yes

Thickness

yes

How stayed

yes

SUPERHEATER.

Type

yes

Date of Approval of Plan

yes

Tested by Hydraulic Pressure to

yes

Date of Test

yes

Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler

yes

Diameter of Safety Valve

yes

Pressure to which each is adjusted

yes

Is easing gear fitted

yes

Is a drain cock or valve fitted at lowest point of superheater

yes

Number, diameter, and thickness of tubes

yes

Spare Gear.

Tubes

yes

Gaskets or joints:—

Manhole

yes

Handhole

yes

Handhole plates

yes

The foregoing is a correct description,

Babcock & Wilcox, Ltd.

Manufacturer.

per David R. Macdonald

Dates

During progress of

1928. Oct. 19. Oct. 15. 9. 17. 25. Nov. 14. 19. Dec. 3. 10. 19

Is the approved plan of boiler forwarded herewith

yes

Survey

work in shops

--

while

During erection on

--

building

board vessel

--

1929. Jan. 16. 24. 28. 29. 30. Feb. 7. 14. 18. 25.

Total No. of visits

35

Mar. 6. 8. 11. 18. 20. 21. 26. Apr. 2. 3. 9. 24. 29.

May 7. June 4.

GENERAL REMARKS

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

These boilers have been built

under survey, in accordance with the Rules and approved plans

The materials and workmanship are good

They have been properly secured on board, safety valves adjusted under

steam, and found sound and tight

3/5 Survey Fee

Babcock & Wilcox

18 : 0 : 0

When applied for,

6 - AUG 1929

3/5 Travelling Expenses (if any)

12 : 0 : 0

When received,

20.8.29

101

G. E. Murdoch

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

6 - AUG 1929

Assigned

See accompanying machinery report

Lloyd's Register

Foundation

010783-010790-0083