

REPORT ON WATER TUBE BOILERS.

No. 1330

116 SEP 1950

Received at London Office

Writing Report Apr. 21st 1949 When handed in at Local Office

19

Port of TORONTO, CANADA

Survey held at St. Catharines, Ont.

Date, First Survey

June 4th/48

Last Survey

Feb. 22nd,

1949

on the A.R.A. "BAHIA THETIS", Hull No. 18

(Number of Visits 12)

Tons {Gross

Net

Halifax, N.S.

By whom built

Halifax Shipyards Ltd.

When built

made at

By whom made

When made

made at

St. Catharines, Ont.

By whom made

Foster Wheeler Ltd.

When made

1949

Horse Power

Owners

Port belonging to

WASTE HEAT

ER TUBE BOILERS—~~MAIN TUBE BOILERS~~

Manufacturers of Steel Shell-Carnegie Ill.) Heads-The Steel Co. of Canada

Approval of plan Sept. 27/48. Jan. 6/49. Montreal.

One Single Drum Waste Heat

Working Pressure 50 lbs.

Tested by Hydraulic Pressure to

160 lbs.

Number and Description or Type

Certificate 1330

Can each boiler be worked separately

Total Heating Surface of Boilers 1540 sq. ft.

draught fitted

Area of fire grate (coal) in each Boiler

type of burners (oil) in each boiler

No. and description of safety valves on

One 1½" Twin Cockburn Morrison Hi-Lift.

Area of each set of valves per boiler

{per rule

{as fitted

3.5 sq. ins.

Pressure to which they

Are they fitted with easing gear

In case of donkey boilers state whether steam from main boilers can enter

key boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

Height of boiler 7'-6"

nd Length

6'-7" x 10'-0 3/4"

Steam Drums:—Number in each boiler

One

Inside diameter

23½"

s of plates

7/16"

Range of Tensile Strength

26 to 35 tons p.s.i.

Are drum shell plates welded

ed

Welded

If fusion welded, state name of welding firm

Foster Wheeler Ltd., St. Cath-

Have all the requirements of the rules

s I vessels been complied with

Yes

Description of riveting:—Cir. seams

long. seams

r of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

int:—Plate

Rivet

Diameter of tube holes in drum

2.015" & 3.015"

Pitch of tube holes

4" 5½", 6 3/4"

ge strength of shell in way of tubes

37.125% min

Steam Drum Heads or Ends:—Range of tensile strength

26 to 30 tons p.s.i.

ss of plates

3/4"

Radius or bow stayed

23" Rad.

Size of manhole or handhole

12" x 16"

Water Drums:—Number

boiler

Inside Diameter

Thickness of plates

Range of tensile strength

Are drum shell plates

or flanged

If fusion welded, state name of welding firm

Have all the requirements of the rules

s I vessels been complied with

Description of riveting:—Cir. seams

long. seam

r of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

ge strength of long. joint:—Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

ge strength of drum shell in way of tubes

Water Drum Heads or Ends:—Range of Tensile strength

ss of plates

Radius or bow stayed

Size of manhole or handhole

s or Sections:—Number

One

Material 8" I.D. S.H.

Thickness

7/8"

Tested by Hydraulic Pressure to

160 lbs.

Diameter

2" & 3"

Thickness No. 9 & No. 8 BWG.

Number

Eight 2" Two 3" Steam Dome or Collector:—Description of

Shell

Inside diameter

Thickness of shell plates

Range of tensile

Description of longitudinal joint

If fusion welded, state name of welding

Have all the requirements of the rules for Class I vessels been complied with

Diameter of rivet holes

r rivets

Thickness of straps

Percentage strength of long. joint

Plate

Rivet

or End Plates:—Range of tensile strength

Thickness

Radius or bow stayed

ERHEATER. Drums or Headers:—Number in each boiler

Inside Diameter

ss

Material

Range of tensile strength

Are drum shell plates welded

ed

If fusion welded, state name of welding firm

Have all the requirements of the rules

s I vessels been complied with

Description of riveting:—Cir. seams

long. seams

r of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

int:—Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

Percentage strength of

ell in way of tubes

Drum Heads or Ends:—

Thickness

Range of tensile strength

or how stayed

Size of manhole or handhole

Number, diameter, and thickness of tubes

by Hydraulic Pressure to

Date of Test

Is a safety valve fitted to each section of the superheater which

shut off from the boiler

No. and description of Safety Valves

Area of each set

er

Pressure to which they are adjusted

Is easing gear fitted

Gear. Has the spare gear required by the rules been supplied

P.T.O.

FOSTER WHEELER LIMITED
ST. CATHARINES, ONTARIO

The foregoing is a correct description,

W.R. Mettiff

Manufacturer.

During progress of

June 4, Sept. 2, 29, Nov. 9, 27, Dec. 6, 14,

work in shops - -

1948. Jan. 13, 18, Feb. 7, 17, 1949.

During erection on

22,

Total No. of visits in shops 12.

board vessel - - -

boiler a duplicate of a previous case Yes

If so, state vessel's name and report No. 1328

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Waste Heat Boiler was made under the special Survey of the Society's Surveyor, at the Works of Foster Wheeler Ltd., St. Catharines, Ont., in accordance with the Rules and the approved plans. All welding done by the Union Melt Process using an approved electrode. The steel plates and tubes were taken from stock, P.T.O.

Survey Fee \$ 100.00 : When applied for, Sept. 21 1949

Travelling Expenses (if any) \$ 20.00 : When received, 19

FRI. 29 SEP 1950

Committee's Minute

Signed See Minute on S.C. Rpt.

John Stephen
Engineer Surveyor to Lloyd's Register of Shipping.Lloyd's Register
Foundation

014751-014762-014765

Identification stampings after hydrostatic test of Drum:

Steam Drum

F.W.No. W.H.B.436-1705

LLOYDS

958

T.P. 160 lbs.

J.S.18.1.49

Stampings after final test on completion of Boiler:

No. 1330

LLOYDS TEST

160 lbs.

W.P. 50 lbs.

J.S.22.2.49

General Remarks (Cont'd.)

made by the Open Hearth process, firebox and boiler flange quality, fully killed. Check tests were made on samples taken from the plates and tubes with satisfactory results. The drum and header were subjected to a hydrostatic pressure of 160 lbs. before drilling, and the completed boiler was subjected to a hydrostatic pressure of 160 lbs. with satisfactory results. The workmanship and materials were good, and in my opinion this Waste Heat Boiler is eligible to be installed in a vessel classed in this Society.

The undermentioned copies of Certificate and Plans are forwarded with this Report:-

Certificates etc.

1. Plate Report of physical tests, and Welding Report.
2. One Macrograph.
3. Certificate of test for header pipe
4. Certificate of test for tubes.

Plans

See Rpt. No. 1328.

JS



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