

REPORT ON WATER TUBE BOILERS.

No. 1329

16 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)

Gross
Tons
Net

Halifax, N.S.

By whom built Halifax Shipyards Ltd.

When built

made at St. Catharines, Ont.

By whom made

When made

Fosterh Wheeler Ltd.

When made

1949

Horse Power

Owners

Port belonging to

ER TUBE BOILERS—~~MANUFACTURED BY~~ DONKEY.—Manufacturers of Steel Shell-Lukens Steel Co. Heads—The Steel Co. of Canada Ltd.

Approval of plan September 18th, and October 25th, 1948. Montreal

One "D" type two drum

Working Pressure 50 lbs.

Number and Description or Type

Certificate 1329

Can each boiler be worked separately

Design Pressure 100 lbs.

Tested by Hydraulic Pressure to 200 lbs. Date of Test 22.2.49

draught fitted

Total Heating Surface of Boilers 760 sq. ft.

type of burners (oil) in each boiler

Area of fire grate (coal) in each Boiler

No. and description of safety valves on

One 2 1/4" Twin Cockburn Morrison Hi-Lift

Area of each set of valves per boiler

per rule

as fitted 7.8 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 11'-2 3/16"

and Length 7'0 1/8" x 7'6 5/16" Steam Drums: Number in each boiler One

Inside diameter 24"

ss of plates 5/8"

Range of Tensile Strength 28 to 35 tons p.s.i.

Are drum shell plates welded

Welded

If fusion welded, state name of welding firm

Foster Wheeler Ltd.

Have all the requirements of the rules

I vessels been complied with

Yes

Description of riveting:—Cir. seams

long. seams

er of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

int:—Plate

Rivet

Diameter of tube holes in drum 1.015" & 1.515"

Pitch of tube holes 1-17/32" & 31"

age strength of shell in way of tubes 33.7%, 53.4%

Steam Drum Heads or Ends: Range of tensile strength

26 to 35 tons p.s.i.

ss of plates 5/8"

Radius or how stayed 24" Rad.

Size of manhole or handhole 12" x 16"

Water Drums: Number

boiler One

Inside Diameter 24"

Thickness of plates 5/8"

Range of tensile strength 28 to 35 tons

p.s.i. Are drum shell plates

or flanged Welded

If fusion welded, state name of welding firm

Foster Wheeler Ltd.

Have all the requirements of the rules

I vessels been complied with

Yes

Description of riveting:—Cir. seams

long. seam

er of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

age strength of long. joint:—Plate

Rivet

Diameter of tube holes in drum 1.015" & 1.515"

Pitch of tube holes 1-17/32" x 31"

age strength of drum shell in way of tubes 33.7%, 53.4%

Water Drum Heads or Ends: Range of Tensile strength

26 to 35 tons p.s.i.

ss of plates 5/8"

Radius or how stayed 24" Rad.

Size of manhole or handhole 12" x 16"

rs or Sections: Number

Material

Thickness

Tested by Hydraulic Pressure to

Diameter 1" and 1 1/2"

Thickness .109"

Number 378-1", 63-1 1/2"

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

f rivets

Thickness of straps

Percentage strength of long. joint

Plate

Rivet

or End Plates: Range of tensile strength

Thickness

Radius or how stayed

ERHEATER. Drums or Headers: Number in each boiler

Inside Diameter

ss

Material

Range of tensile strength

Are drum shell plates welded

ged

If fusion welded, state name of welding firm

Have all the requirements of the rules

I vessels been complied with

Description of riveting:—Cir. seams

long. seams

er of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

oint:—Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

Percentage strength of

bell 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

es

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 The foregoing is a correct description,
ST. CATHARINES, ONTARIO

Manufacturer.

During progress of work in shops - June 4, Sept. 2, 29, Nov. 9, 27, Dec. 6,
During erection on board vessel - 14, 1948, Jan. 13, 18, Feb. 7, 17, 22, 1949

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits in shops 12

boiler a duplicate of a previous case

Yes

If so, state vessel's name and report No. 1326

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This donkey boiler was made under the Special
Survey of the Society's Surveyor at the Works of Foster Wheeler Ltd., St. Catharines, Ont., in ac-
cance with the Rules and the approved Plans. All welding done by the Union Melt process with an
approved electrode. The steel plates and tubes were taken from stock, made by the Open 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 J.E.Rpt.

Engineer Surveyor to Lloyd's Register of Shipping.

014 751-014762-0143

Identification stampings after hydrostatic test of Drums:-

Steam Drum
F.W.No.B4422 S-1708

LLOYDS
955
T.P. 200 lbs.
J.S.13.1.49

Water Drum
F.W.No.B4422 M-1708

LLOYDS
955
T.P. 200 lbs.
J.S.13.1.49

Stampings after tubing and final test:-

1329
LLOYD'S TEST
200 lbs.
W.P. 50 lbs.
J.S.22.2.49
FWB-3274

General Remarks (Cont'd.)

Hearth process to A.S.T.M. Spec. A-212 Grade "B", firebox quality fully killed. Check tests were made on samples taken from the plates and tubes with satisfactory results. The drums were subjected to a hydrostatic pressure of 200 lbs. before drilling, and the completed boiler was subjected to a hydrostatic pressure of 200 lbs., with satisfactory results. The workmanship and materials were good, and in my opinion this donkey boiler is eligible to be installed in a vessel classed in this Society.

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

Certificates, etc.

1. Plate Report of physical tests, and Welding Report.
2. Two Macrographs.
3. Certificate of Test of 1" tubes.
4. Certificate of Test of 1½" tubes.

Plans

See Rpt. 1326.

JS



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Foundation

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