

REPORT ON WATER TUBE BOILERS.

No. 38079

Received at London Office

Date of writing Report 8 Dec 1937

When handed in at Local Office 8 Dec 1937

Port of New York

No. in Survey held at
Reg. Bk.

New York

Date, First Survey 26 Oct

Last Survey 26 Nov 1937

on the

SS ESSO BAYWAY

(Number of Visits 4)

Gross 7699

Net 4654

Master

Built at Kearny N.J.

By whom built Federal S.B. & D.D. Co.

When built 1937

Engines made at

Trenton, N.J.

By whom made

De Laval Steam Turbine Co.

When made 1937

Boilers made at

Cartersville N.J.

By whom made

Foster Wheeler Corp.

When made 1937

SHAFT
Registered Horse Power

3000

Owners

Standard Oil Co. of New Jersey

Port belonging to Wilmington Del.

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel

LUKENS STEEL CO.
CARNEGIE STEEL CO.

(Letter for Record S) Date of Approval of plan NOT BUILT UNDER SPECIAL SURVEY

of Boilers 2-D TYPE - FOSTER WHEELER

Working Pressure 450 LBS

Tested by Hydraulic Pressure to 675

Number and Description or Type

No. of Certificate NOT ISSUED

Can each boiler be worked separately

YES

Total Heating Surface of Boilers

9190 sq ft

Is forced draught fitted

YES

Area of fire grate (coal) in each Boiler

OIL FIRED

Total grate area of boilers in vessel including

Main and Auxiliary

No. and type of burners (oil) in each boiler 3- ODD HEXPRESS

No. and description of safety valves on

each boiler 2- SPRING LOADED

Area of each valve

707 sq in

Pressure to which they are adjusted 440 LBS

Are they fitted with easing gear

YES

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

Smallest distance between boilers or uptakes and bunkers or woodwork

NO WOODWORK

Height of Boiler 18' 0 1/2"

Width and Length 10' 9" x 16' 4 1/8"

Steam Drums:—Number in each boiler

ONE

Inside diameter

42"

Material of plates

STEEL

Thickness

1 1/2"

Range of Tensile Strength

60000 LB MINIMUM

Are drum shell plates welded or flanged

FUSION WELDED

Description of riveting:—

Cir. seams

FUSION WELDED

long. seams

FUSION WELDED

Diameter of rivet holes in long. seams

Pitch of Rivets

Lap of plate or width of butt straps

BUTT JOINT

Thickness of straps

3/4"

Percentage strength of long. joint:—Plate 90% ALLOWED Rivet

Diameter of tube holes in drum

1 3/32" x 2 3/32"

Pitch of tube holes

2 1/4" x 4 1/2"

Percentage strength of shell in way of tubes 48.7

If Drum has a flat side state method of staying

NO FLAT SIDE

Depth and thickness of girders at centre

(if fitted)

Distance apart

Number and pitch of stays in each

Working pressure

by rules 450 LBS.

Steam Drum Heads or Ends:—Material

STEEL

Thickness 1 3/32" x 1 1/2"

Radius or how stayed ELLIPSOIDAL

Size of Manhole or Handhole

12" x 16"

Water Drums:—Number in each boiler

ONE

Inside Diameter

32"

Material of plates

STEEL

Thickness

1 1/8"

Range of tensile strength 60000 MIN

Are drum shell plates welded

or flanged

FUSION WELDED

Description of riveting:—Cir. seams

FUSION WELDED

long. seams

FUSION WELDED

Diameter of Rivet Holes in

long. seams

Pitch of rivets

Lap of plates or width of butt straps

BUTT JOINT

Thickness of straps

3/4"

Percentage strength of long. joint:—Plate 90% ALLOWED Rivet

Percentage strength of drum shell in way of tubes 48.7

Water Drum Heads or Ends:—Material

STEEL

Thickness 1 1/2" x 2 3/32"

Radius or how stayed ELLIPSOIDAL

Size of manhole or handhole 12" x 16"

Headers or Sections:—Number

NONE

Material

Thickness

Tested by Hydraulic Pressure to

Material of Stays

Area at smallest part

Area supported by each stay

Working Pressure by Rules 450 LBS

Tubes:—Diameter 1 1/4" x 2"

Thickness 108" x 132"

Number 414-1 1/4"

147-2

Steam Dome or Collector:—Description of Joint to Shell

NONE

Percentage strength of Joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diameter of Rivet Holes

Pitch of Rivets

Working Pressure of shell

by Rules

Crown or End Plates:—Material

Thickness

How stayed

SUPERHEATER.

Type

INTERDECK
CONVECTION
575-24 FT

Date of Approval of Plan

Tested by Hydraulic Pressure to

900 LBS

Date of Test

26/10/37

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

CANNOT BE
SHUT OFF

Diameter of Safety Valve

1 1/2"

Pressure to which each is adjusted

415 LBS

Is easing gear fitted

YES

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

Number, diameter, and thickness of tubes

120- 1 1/4" - 108"

Spare Gear.

Tubes

44

Gaskets or joints:—Manhole

5

Handhole

7

Handhole plates

7

The foregoing is a correct description,

FOSTER WHEELER CORP

per

J. S. Heck

Manufacturer.

Dates of Survey

During progress of

work in shops - -

Is the approved plan of boiler forwarded herewith

FORWARDED WITH

while

During erection on

1937 Oct 26, Nov 16, 24, 26

Total No. of visits

3

REPORT ON SISTER

building

board vessel - - -

VESSEL.

SS ESSO BAYWAY

NYK RPT 37918

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

PLEASE SEE ATTACHED SHEET

Survey Fee £ INCLUSIVE FEE
 Travelling Expenses (if any) £ CHARGED ON:
 MACH' REPAIR : : :
 When applied for, 19
 When received, 19

John S. Heck

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK DEC 15 1937

Assigned 2 WTB (Spt) 450 lbs.



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 Lloyd's Register
 Foundation

003028-003039-0206 1/2

S.S. " ESSO BAYWAY "WATERTUBE BOILERS

These boilers were not built under Special Survey but they have been examined and as far as can be seen the workmanship and material are good. The scantlings are in accordance with the Rules of the U. S. Steamboat Inspectors.

The boilers have been built under supervision of the U. S. Steamboat Inspectors and Special Survey of the American Bureau of Shipping. The drums have been fusion welded in accordance with the Rules of those authorities, and the material and electric welding has been tested by their representatives. There is attached hereto a report of tests stated to have been made on the fusion welds.

The complete boilers have been hydraulically tested to 900 lbs before fitting on board by the above authorities and to 675 lbs after fitting on board in presence of the undersigned, and the boilers were found good and shewing no sign of weakness at that pressure. The boiler drums were examined internally by the undersigned, and under steam, and they appear to be good, and were found tight.

The boilers have been built to withstand a working pressure of 450 lbs. The safety valves have been set, in presence of the undersigned, to 440 lbs, and the safety valve on the superheater outlet has been set at 415 lbs.

In my opinion, these boilers are now in good and safe working condition and eligible to receive the notation 2 W. T. BOILERS 450 lbs. in the Register Book, subject to being annually surveyed.

John S. Heck

Surveyor to Lloyd's Register of Shipping