

REPORT ON WATER TUBE BOILERS.

No. 58741

Received at London Office

AUG 18 1937

Date of writing Report

4/8/37

19

When handed in at Local Office

14.8.

19

37

Port of

Glasgow

No. in Reg. Bk.

Survey held at

Glasgow

Date, First Survey

24.2.37

Last Survey

6-8-37

19

on the

2 Boilers for Matheson Co. (Contract No 1700)

Number of Visits

11

Gross Tons

Net

Master

Built at

By whom built

When built

Engines made at

By whom made

When made

Boilers made at

Scotstoun

By whom made

Yarrow & Co Ltd

When made

1937

Registered Horse Power

Owners

Port belonging to

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

Steel Co: of Scotland Ltd.

(Letter for Record)

Date of Approval of plan

3/3/37

Number and Description or Type

of Boilers

Two - Yarrow.

Working Pressure

250 lb

Tested by Hydraulic Pressure to

425 lb

Date of Test

28/4/37

No. of Certificate

19991.

Can each boiler be worked separately

Yes

Total Heating Surface of Boilers

5000 sq ft

Is forced draught fitted

Area of fire grate (coal) in each Boiler

63 sq ft

Total grate area of boilers in vessel including

Main and Auxiliary

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

each boiler

1-2 1/2" Double Imp. High Lift approved.

Area of each valve

3.970 sq in

No and description of safety valves on

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

Height of Boiler

Width and Length

Steam Drums:—Number in each boiler

1

Inside diameter

3' 6 3/4"

Material of plates

Steel

Thickness

1 9/16" & 9/16"

Range of Tensile Strength

26-30 Tons

Are drum shell plates welded or flanged

NO

Description of riveting:—

Cir. seams

D.R.

long. seams

D.R.-D.B.S.

Diameter of rivet holes in long. seams

13/16"

Pitch of Rivets

3 1/32"

Lap of plate or width of butt straps

8 1/4" & 7 1/4"

Thickness of straps

13/32" & 29/64"

Percentage strength of long. joint:—Plate

75

Rivet

90

Diameter of tube holes in drum

1.503" & 1.26"

Pitch of tube holes

1 5/8" DIAG. PITCHES

Percentage strength of shell in way of tubes

33.3

If Drum has a flat side state method of staying

NO

Depth and thickness of girders at centre

(if fitted)

Distance apart

264 lb

Number and pitch of stays in each

Working pressure

by rules

264 lb

Steam Drum Heads or Ends:—Material

STEEL.

Thickness

7/8" & 3/4"

Radius or how stayed

3'-0"

Size of Manhole or Handhole

16" x 12"

Water Drums:—Number in each boiler

2

Inside Diameter

23"

Material of plates

STEEL

Thickness

1 7/8" & 5/8"

Range of tensile strength

26-30 TONS

Are drum shell plates welded

NO

or flanged

NO

Description of riveting:—Cir. seams

S.R.

long. seams

D.R.-D.B.S.

Diameter of Rivet Holes in

long. seams

7/16"

Pitch of rivets

2 3/4"

Lap of plates or width of butt straps

5 7/8" & 5 1/2"

Thickness of straps

7/16"

Diameter of tube holes in drum

1.503" & 1.26"

Pitch of tube holes

1 5/8" DIAG.

Percentage strength of long. joint:—Plate

63

Rivet

72

Diameter of tube holes in drum

1.503" & 1.26"

Percentage strength of drum shell in way of tubes

33.3

Water Drum Heads or Ends:—Material

STEEL.

Thickness

3/4"

Headers or Sections:—Number

—

Material

Tested by Hydraulic Pressure to

Material of Stays

Area at smallest part

Thickness

Working Pressure by Rules

Tubes:—Diameter

1 1/2" & 1 1/4"

Area supported by each stay

PER BLK. 128 @ 1 1/2"

Number

970 @ 1 1/4"

Steam Dome or Collector:—Description of Joint to Shell

—

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

Material

Thickness

How stayed

—

—

—

—

—

—

—

—

—

—

Area at smallest part

Thickness

Working Pressure by Rules

Tubes:—Diameter

1 1/2" & 1 1/4"

Area supported by each stay

PER BLK. 128 @ 1 1/2"

Number

970 @ 1 1/4"

Steam Dome or Collector:—Description of Joint to Shell

—

Diameter

Thickness of shell plates

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

—

—

—

—

—

Area at smallest part

Thickness

Working Pressure by Rules

Tubes:—Diameter

1 1/2" & 1 1/4"

Area supported by each stay

PER BLK. 128 @ 1 1/2"

Number

970 @ 1 1/4"

Steam Dome or Collector:—Description of Joint to Shell

—

Diameter

Thickness of shell plates

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

—

—

—

—

—

Area at smallest part

Thickness

Working Pressure by Rules

Tubes:—Diameter

1 1/2" & 1 1/4"

Area supported by each stay

PER BLK. 128 @ 1 1/2"

Number

970 @ 1 1/4"

Steam Dome or Collector:—Description of Joint to Shell

—

Diameter

Thickness of shell plates

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

—

—

—

—

—

Area at smallest part

Thickness

Working Pressure by Rules

Tubes:—Diameter

1 1/2" & 1 1/4"

Area supported by each stay

PER BLK. 128 @ 1 1/2"

Number

970 @ 1 1/4"

Steam Dome or Collector:—Description of Joint to Shell

—

Diameter

Thickness of shell plates

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

—

—

—

—

—

Area at smallest part

Thickness