

REPORT ON WATER TUBE BOILERS.

No. 105405

Date of writing Report

19

When handed in at Local Office

2 JUL 1948

Received at London Office

Port of NEWCASTLE-on-TYNE

No. in
Reg. Bk.

Survey held at

South Shields

Date, First Survey

11/5/48

Last Survey

17/6/48

19

37918

on the

Turbo Electric

'TURBINELLUS'

(Number of Visits 20)

Gross 10640

Net 6302

Built at

Portland Oregon

By whom built

Kaiser Co. Inc.

When built 1944

Engines made at

Shenectady

By whom made

G. E. C.

When made 1944

Boilers made at

New York

By whom made

General Eng. Co. New York

When made 1944

Nominal Horse Power

Owners Anglo Saxon Petroleum Co. Ltd Port belonging to London

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

Date of Approval of plan

of Boilers

2 - S.M. Type

Working Pressure 500

Tested by Hydraulic Pressure to 750

Date of Test

No. of Certificate

Can each boiler be worked separately

Yes

Total Heating Surface of Boilers 11,354 sq. ft.

Is forced draught fitted

Yes

Area of fire grate (coal) in each Boiler

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

4 - Lodd's 'H express'

No. and description of safety valves on

each boiler 2 - 2 1/2" duplex consolidated

Area of each set of valve

4.9 sq. in.

Pressure to which they are adjusted 500 lbs/sq. in.

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

5' 0"

Height of boiler 21' 0"

Width and Length 11' 0" x 15' 6"

Steam Drums:—Number in each boiler

One

Inside diameter

42"

Thickness of plates

1 1/2" & 3/4"

Range of Tensile Strength

Are drum shell plates welded or flanged

Description of riveting:—

Cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plate or width of butt straps

Thickness of straps

Percentage strength of long. joint:—Plate

Rivet

Diameter of tube holes in drum

4 1/2" x 5/8"

Pitch of tube holes

7"

Percentage strength of shell in way of tubes

Working pressure by rules

Steam Drum Heads or Ends:—Range of tensile strength

Thickness of plates

1 1/2"

Radius or how stayed

Ellipsoidal

Size of manhole or handhole

12" x 16"

Working pressure by rules

Water Drums:—Number

in each boiler

Inside Diameter

Thickness of plates

Range of tensile strength

Are drum shell plates

welded or flanged

Description of riveting:—Cir. seams

long. seam

Diameter of rivet holes in

long. seams

Pitch of rivets

Lap of plates or width of butt straps

Thickness of straps

Percentage strength of long. joint:—Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

Percentage strength of drum shell in way of tubes

Working pressure by rules

Water Drum Heads or Ends:—Range of

Tensile strength

Thickness of plates

Radius or how stayed

Size of manhole or handhole

Working pressure by rules

Headers or Sections:—Number

14

Material

Steel

Thickness

9/16"

Tested by Hydraulic Pressure to

Tubes:—Diameter

1 1/2"; 2"; 4"

Thickness

13; 10; 5 BWG

Number 1148, 56, 48

Steam Drum

Description of Joint to Shell

Welded

Inside diameter

7 1/4" x 7 1/4"

Thickness of shell plates

3/16"

Range of tensile strength

Description of longitudinal joint

Diameter of rivet holes

Pitch of rivets

Lap of plate or width of

butt straps

Thickness of straps

Percentage strength of long. joint

Plate

Rivet

Working Pressure of shell by rules

Crown or End Plates:—Range of tensile strength

Thickness

Radius or how stayed

Working pressure by rules

SUPERHEATER.

Inter-drum

Drums or Headers:—Number in each boiler

Two

Inside Diameter

5 3/4" x 5 3/4"

or flanged

Description of riveting:—Cir. seams

long. seams

Diameter of rivet holes in

long. seams

Pitch of rivets

Lap of plates or width of butt straps

Thickness of straps

Percentage strength of long. joint:—Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

Percentage strength of drum shell in way of tubes

Working pressure by rules

Drum Heads or Ends:—

Thickness

Range of tensile strength

Radius or how stayed

Size of manhole or handhole

Working pressure by rules

Number, diameter, and thickness of tubes 145 - 1 1/2" - 11 BWG

Tested by Hydraulic Pressure to

Date of Test

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

No. and description of Safety Valves

1 - 1 1/2" consolidated type

Area of each set of valves

1.23 sq. in.

Pressure to which they are adjusted

473 lbs/sq. in.

Is easing gear fitted

Yes

Spare Gear.

Has the spare gear required by the rules been supplied

A number of 1 1/2"; 2"; 4"; and 1 1/4" (sft)

water tubes

HS plates = 4934 lb

Total for 26 lbs

Sft = 743 lb = 11354 lb

The foregoing is a correct description,

Manufacturer.

Dates

During progress of

of Survey

work in shops - -

while

During erection on

building

board vessel - - -

Is the approved plan of boiler forwarded herewith

Total No. of visits

Is this boiler a duplicate of a previous case

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

GENERAL REMARKS

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

These W.T. boilers have been constructed under the supervision of the U.S. Coast Guards and the American Bureau of Shipping. The scantlings have been verified as far as practicable. The materials and workmanship considered good.

Survey Fee

... .. £

When applied for,

19

Travelling Expenses (if any) £

When received,

19

Committee's Minute

FRI. 13 AUG 1948

Assigned

See F.E. moly. rpt.

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