

REPORT ON WATER TUBE BOILERS.

No. 96890

Received at London Office

Date of writing Report

19

When handed in at Local Office

14/11/38

Port of

NEWCASTLE-ON-TYNE

No. in

Survey held at

Newcastle on Tyne

Date, First Survey

2/2/38

Last Survey

11/11/38

1938

Reg. Bk.

87009

on the

Twin Is. S/S "AMRA"

(Number of Visits)

Tons

Gross 8314

Net 3993

Master

Built at

Newcastle

By whom built

Swan, Hunter & Wigham

When built

1938-11

Engines made at

Newcastle

By whom made

Parsons' Marine Steam Turbine Co. Ltd.

When made

1938

Boilers made at

RENFREW & NEWCASTLE

By whom made

SWAN, HUNTER & WIGHAM RICH'D'SN. LTD.

When made

1938

Registered Horse Power

Owners

British India Steam Navigation Co. Ltd.

Port belonging to

LONDON

WATER TUBE BOILERS—MAIN,

SEE ALSO GLASGOW RPT. N° 60057.

Colvilles, Ltd.

(Letter for Record

S

Date of Approval of plan

11-25/5/37; 4/4/37; 3/8/37; 23-24/9/37.

Number and Description of Type

of Boilers THREE Babcock & Wilcox Type

Working Pressure 450 lbs.

Tested by Hydraulic Pressure to 725 lbs.

Date of Test 3rd AUG. 38.

No. of Certificate

789, 790, 791

Can each boiler be worked separately

Yes

Total Heating Surface of Boilers

17895 sq. ft.

Is forced draught fitted

Yes

Area of fire grate (coal) in each Boiler

154 sq. ft.

Total grate area of boilers in vessel including

Main and Auxiliary

462 sq. ft.

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

None.

No. and description of safety valves on

each boiler One 2 1/2" DOUBLE Improved High Lift

Area of each valve

4.9 sq. in.

Pressure to which they are adjusted

450 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

about 21"

Height of Boiler

23'6" APPROX.

Width and Length

21'7" x 18'6" APPROX.

Steam Drums:—

Number in each boiler ONE

Inside diameter

3'6"

Material of plates

Mild Steel

Thickness

1 1/8"

Range of Tensile Strength

28-32 tons/sq. in.

Are drum shell plates welded or flanged

Fusion Welded

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 3/4" MAX.

Pitch of tube holes

7 1/4"

Percentage strength of shell in way of tubes

43.58 MIN. %.

If Drum has a flat side state method of staying

Depth and thickness of girders at centre

(if fitted)

Distance apart

Number and pitch of stays in each

Working pressure

by rules

Steam Drum Heads or Ends:—

Material MILD STEEL

Thickness

1 7/16"

Radius or how stayed

3'-0" Rad.

Size of Manhole or Handhole

11" x 15"

Water Drums:—Number in each boiler

Inside Diameter

Material of plates

Thickness

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 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

Water Drum Heads or Ends:—Material

Thickness

Radius or how stayed

Size of manhole or handhole

Headers or Sections:—Number

27.

Material

S.D. Steel

Thickness

3/4" & 7/8"

Tested by Hydraulic Pressure to

725 lbs./sq. in.

Material of Stays

PER BOILER

Area at smallest part

Area supported by each stay

Working Pressure by Rules

450 lbs./sq. in.

Tubes:—Diameter

4 1/2" & 1 1/2"

Thickness

2 L.S.G. 789 L.S.G.

Number

81 @ 4" & 1005 @ 1 1/2"

Steam Dome or Collector:—Description of

MUD DRUM: NO PER BOILER

ONE.

Percentage strength of Joint

Diameter

6" x 6"

Thickness of shell plates

3/4"

Material

Steel

Description of longitudinal joint

Solid drawn

Diameter of Rivet Holes

Pitch of Rivets

Working Pressure of shell

450 lbs./sq. in.

Crown or End Plates:—Material

Thickness

How stayed

SUPERHEATER. Type

B & W.

Date of Approval of Plan

23/9/37

Tested by Hydraulic Pressure to

725 lbs./sq. in.

Date of Test

15/6/38; 8/7/38; 22/7/38

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

Yes.

Diameter of Safety Valve

2 1/2" Improved H.L.L.

Pressure to which each is adjusted

440 lbs./sq. in.

Is easing gear fitted

Yes

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

Yes

Number, diameter, and thickness of tubes

90 @ 1 1/2" x 8 L.S.G.

Spare Gear. Tubes

25 @ 4"

Gaskets or joints:—Manhole

Handhole

6 @ 3 3/4"

Handhole plates

2 @ 3 3/4"

90 @ 3 3/4" sptr

10 @ 3 3/4" sptr

FOR the foregoing is a correct description,

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

Manufacturer.

UPPER HEATER. Type

B & W.

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