

## REPORT ON WATER TUBE BOILERS.

No. 15283

12 NOV 1951

Received at London Office

Writing Report

19

When handed in at Local Office

5. 11. 1951

Port of

BELFAST

Please see Report No.

Survey held at

BELFAST

Date, First Survey

Last Survey

19

Bk.

on the

T.S. S.S. "RHODESIA CASTLE"

(Number of Visits)

Tons

Gross 17040.76.

Net 9434.56.

at

BELFAST

By whom built

HARLAND &amp; WOLFF, LTD.

When built

10/51.

Boilers made at

- do -

By whom made

- do -

When made

10/51.

Boilers made at

- do -

By whom made

- do -

When made

10/51.

Nominal Horse Power

12,2940.

Owners

LLOYD CASTLE MAIL S.S. CO. LTD.

Port belonging to

LONDON.

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

Approval of plan SECRETARY'S LETTER 34.51 &amp; SUBSEQUENTLY.

Number and Description or Type

Boilers 3- B.W. INTEGRAL FURNACE TYPE.

DESIGN WORKING Pressure 505.

Tested by Hydraulic Pressure to 808

Date of Test 4.5.19.51.

Certificate 1479-80-81. Can each boiler be worked separately

YES.

Total Heating Surface of Boilers SUPERHEATER 1476.

TOTAL 19551 sq.

Forced draught fitted

YES.

Area of fire grate (coal) in each Boiler

and type of burners (oil) in each boiler 5- BABCOCK &amp; WILCOX.

No. and description of safety valves on

boiler 2- 2 1/2" C.S. COCKBURN IMP. HIGH LIFT.

Area of each set of valves per boiler

per rule

Pressure to which they

adjusted 495 lbs/sq.

Are they fitted with easing gear

YES.

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

donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

10'-0"

Height of boiler

18'-9"

Width and Length

15'-5" x 14'-5"

Steam Drums:—Number in each boiler

ONE.

Inside diameter

TUBE PLATE 1'-11 3/32 Rqd.

Thickness of plates

TUBE PLATE 3 1/8"

Range of Tensile Strength

28/32 TONS/sq.

Are drum shell plates welded

flanged WELDED.

If fusion welded, state name of welding firm HARLAND &amp; WOLFF, LTD.

Have all the requirements of the rules

Class I vessels been complied with

YES.

Description of riveting:—Cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

joint:—Plate

Rivet

Diameter of tube holes in drum

1 1/4", 2", 3 1/4", 4 1/2"

Pitch of tube holes

4" x 3 1/8" FOR 2" O/D TUBES.

Percentage strength of shell in way of tubes

27.7% FOR 1 1/4" O/D TUBES.

38% + 52.5% FOR 2" O/D TUBES.

Steam Drum Heads or Ends:—Range of tensile strength

26/30 TONS/sq.

Thickness of plates

1 1/2"

Radius or how stayed

3'-6" Rqd. INSIDE.

Size of manhole or handhole

16" x 12"

Water Drums:—Number

each boiler

ONE.

Inside Diameter

TUBE 1'-2 1/2" Rqd.

Thickness of plates

TUBE 1 1/8"

Range of tensile strength

28/32 TONS/sq.

led or flanged

WELDED.

If fusion welded, state name of welding firm HARLAND &amp; WOLFF, LTD.

Have all the requirements of the rules

Class I vessels been complied with

YES.

Description of riveting:—Cir. seams

long. seam

Diameter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

joint:—Plate

Rivet

Diameter of tube holes in drum

1 1/4", 2", 3 1/4", 4 1/2"

Pitch of tube holes

4" x 3 1/8" FOR 2" O/D TUBES.

Percentage strength of drum shell in way of tubes

27.7% FOR 1 1/4" O/D TUBES.

38% + 52.5% FOR 2" O/D TUBES.

Water Drum Heads or Ends:—Range of Tensile strength

26/30 TONS/sq.

Thickness of plates

1"

Radius or how stayed

2'-6" Rqd. INSIDE.

Size of manhole or handhole

16" x 12"

Boilers or Sections:—Number

ONE.

Material

M.S.

Thickness

7/8" END 3/4"

Tested by Hydraulic Pressure to

808 lbs/sq.

Boilers:—Diameter

1 1/4", 2", 3 1/4", 4 1/2"

Thickness

1 1/4" - 10 S.W.G. 3 1/4" - 3 S.W.G.

Number

2 - 11 7/4 1/2 - 12.

Steam Dome or Collector:—Description of

to Shell

Inside diameter

Thickness of shell plates

Range of tensile

Length

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

YES.

Diameter of rivet holes

Pitch of rivets

Thickness of straps

Percentage strength of long. joint

Plate

Rivet

Boilers or End Plates:—Range of tensile strength

YES.

Thickness

Radius or how stayed

SUPERHEATER. Drums or Headers:—Number in each boiler

2.

Material

STEEL.

Range of tensile strength

28/32 TONS/sq.

Are drum shell plates welded

flanged

FORGED.

If fusion welded, state name of welding firm

Have all the requirements of the rules

Class I vessels been complied with

GLS CERT. NO. 85883.

Description of riveting:—Cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

joint:—Plate

Rivet

Diameter of tube holes in drum

1 1/4"

Pitch of tube holes

1 7/8"

Percentage strength of

shell in way of tubes

32.5%.

Drum Heads or Ends:—

ENDS.

Thickness

1"

Range of tensile strength

28/32.

Radius or how stayed

FLAT.

Size of manhole or handhole

3' 2 1/2" SQ.

Number, diameter, and thickness of tubes

110 - 1 1/4" O/D - 10 S.W.G.

Tested by Hydraulic Pressure to

810 lbs/sq.

Date of Test

6.6.51 - 8.6.51 - 28.6.51.

Is a safety valve fitted to each section of the superheater which

be shut off from the boiler

YES.

No. and description of Safety Valves

1 - 2 1/2" C.S. COCKBURN IMP. HIGH LIFT.

Area of each set

valves

4.908 sq. ins.

Pressure to which they are adjusted

485 lbs/sq.

Is easing gear fitted

YES.

Easing Gear.

Has the spare gear required by the rules been supplied

YES.

The foregoing is a correct description,

FOR HARLAND AND WOLFF, LIMITED

Manufacturer.

During progress of  
work in shops - -  
During erection on  
board vessel - - -

Is the approved plan of boiler forwarded herewith **RETAINED FOR USE ON SISTER VESSEL YARD NO. 1432.**  
Total No. of visits

Is boiler a duplicate of a previous case. No. If so, state vessel's name and report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers were constructed and installed under Special Survey in accordance with Rules approved plans and Secretary's orders. The materials and workmanship are good. On completion, each Boiler was examined under full working conditions, and Safety Valves adjusted to above pressures.

Survey Fee £  
Travelling Expenses (if any) £

When applied for, 19

When received, 19

Committee's Minute

Signed

Su F. E. mchey spk

TUES. 4 DEC. 1951

A. Taintor &amp; B. Smal

Engineer Surveyor to Lloyd's Register of Shipping.

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