

Rpt. 5c.

RECEIVED

LIVERPOOL F.E. Rpt No. 123744.
REPORT ON WATER TUBE BOILERS. No. 69609

Received at London Office 27 FEB 1946

Date of writing Report

19

When handed in at Local Office

19

Port of

GLASGOW

No. in
Reg. Book.

Survey held at

RENFREW

Date, First Survey

8. 6. 44

Last Survey

10. 2. 45

on the

SS. City of Carlisle

(Number of Visits

27)

Gross

Tons

Built at

BIRKENHEAD

By whom built

CAMMELL LAIRD & CO. LD.

Yard No.

1156

When built

1946

Engines made at

- B. & W. GLS

By whom made

Baird & Co. Carlisle

Engine No.

51160

When made

1946

Boilers made at

RENFREW

By whom made

BARBOCK & WILCOX, LD.

Boiler No.

6/1818

When made

1945

Nominal Horse Power

861

Owners

Ellerman Lines Ltd

Port belonging to

London

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

COLVILLE LTD.

Date of Approval of plan

31-3-44

of Boilers

2-B & W WATER TUBE

Working Pressure

460 LB.

DRUMS

Tested by Hydraulic Pressure to

740 LB.

No. and Description of Type

P. 1-2-45

No. of Certificate

STB. 54567

Is forced draught fitted

YES

Can each boiler be worked separately

YES

Total Heating Surface of Boilers

12,920 sq ft

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

5-Wallend Howden Type

No. and description of safety valves on

each boiler

1-2 1/2" HIGH LIFT DOUBLE

Area of each set of valves per boiler

per rule

as fitted

9.80"

Pressure to which they

are adjusted

460 lb

Are they fitted with easing gear

YES

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

the donkey boiler

NO

Smallest distance between boilers or uptakes and bunkers or woodwork

well clear

Height of boiler

22'6"

Width and length

20'-0" x 20'-0"

Steam Drums:—Number in each boiler

ONE

Inside diameter

3'-6"

Thickness of plates

1 1/16"

Range of tensile strength

28-32 TONS

Are drum shell plates welded

or flanged

WELDED

If fusion welded, state name of welding firm

BARBOCK & WILCOX, LD.

Have all the requirements of the Rules

for Class I vessels been complied with

YES

Description of riveting:—Circ. seams

-

long. seams

-

Diameter of rivet holes in long. seams

-

Pitch of rivets

-

Thickness of straps

-

Percentage strength of

long. joint:—Plate

-

Rivet

-

Diameter of tube holes in drum

4"

Pitch of tube holes

7 1/4"

Percentage strength of shell in way of tubes

-

Steam Drum Heads or Ends:—Range of tensile strength

26-30 TONS

Thickness of plates

MADE FROM 1 1/2"

Radius or how stayed

3'-0"

Size of manhole or handhole

16" x 12"

Water Drums:—Number

in each boiler

-

Inside diameter

-

Thickness of plates

-

Range of tensile strength

-

Are drum shell plates

welded or flanged

-

If fusion welded, state name of welding firm

-

Have all the requirements of the Rules

for Class I vessels been complied with

-

Description of riveting:—Circ. seams

-

long. seams

-

Diameter of rivet holes in long. seams

-

Pitch of rivets

-

Thickness of straps

-

Pitch of tube holes

-

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:—Range of tensile strength

-

Thickness of plates

-

Radius or how stayed

-

Size of manhole or handhole

-

Headers or Sections:—Number

26 DOWN TAKE

Material

SD STEEL

Thickness

5/8" NOM.

Tested by hydraulic pressure to

740 LB.

Tubes:—Diameter

4" & 1 3/16"

Thickness

4" & 1 1/16"

Number

808

1 1/16"

Steam Drums or Collectors

-

Description of

joint to shell

-

Inside diameter

6" x 6"

Thickness of shell plates

3/4" NOM.

Range of tensile

-

-

welded, state name of welding

strength

26/30 TONS

Description of longitudinal joint

SD STEEL

-

Have all the requirements for the Rules for Class I vessels been complied with

YES

Diameter of rivet holes

-

plate

rivet

-

Pitch of rivets

-

Thickness of straps

-

Percentage strength of long. joint

-

plate

-

rivet

-

Crown or End Plates:—Range of tensile strength

-

Thickness

-

Radius or how stayed

-

SUPERHEATER, Drums or Headers:—Number in each boiler

2

Inside diameter

9 1/2"

-

-

-

-

Are drum shell plates welded

Thickness

1 3/8"

Material

SD STEEL

Range of tensile strength

28/32 TONS

-

-

-

Have all the requirements of the Rules

or flanged

NO

If fusion welded, state name of welding firm

-

Description of riveting:—Circ. seams

-

long. seams

-

for Class I vessels been complied with

-

Diameter of rivet holes in long. seams

-

Pitch of rivets

-

Diameter of rivet holes in long. seams

-

Pitch of rivets

-

Thickness of straps

-

Percentage strength of

long. joint:—Plate

-

Rivet

-

Diameter of tube holes in drum

1 1/2"

Pitch of tube holes

5 1/4" GROUPS

Percentage strength of

-

drum shell in way of tubes

-

Drum Heads or Ends:—FORGED

-

Thickness

1 3/8"

Range of tensile strength

-

-

Radius or how stayed

-

Size of manhole or handhole

3' 2 1/2"

Number, diameter, and thickness of tubes

84 @ 1 1/2" 9g

-

-

Tested by hydraulic pressure to

740 LB.

Date of test

8-1-45

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

can be shut off from the boiler

YES

No. and description of safety valves

1-2 1/2" HIGH LIFT SINGLE

-

-

Area of each set

-

-

of valves

4.90"

Pressure to which they are adjusted

4.50 lb

-

-

Is easing gear fitted

YES

-

-

-

Spare Gear. Has the spare gear required by the Rules been supplied

YES

Total H.S. of Superheater = 1900 sq feet

The foregoing is a correct description,

Baird & Co. Carlisle

Manufacturer.

Dates of Survey

During progress of work in shops

1944 Jun 8 Jul 12 Aug 31 Sep 11 15 20 Nov 2 13 19 Dec 1 12

while building

During erection on board vessel

1945 Jan 11 24 28 30 Feb 1 19 Mar 6 15 27 Apr 24 May 10

Is the approved plan of boiler forwarded herewith

YES

Total No. of visits

27

Is this 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.)

The pressure parts of these boilers have been

constructed under special survey in accordance with the Rules and approved plans, and the materials

and workmanship are good. They have been sent to Messrs Cammell Laird & Co., Birkenhead, where the

boilers will be erected and hydraulically tested. Erected, tested to 740 lb hyd, fitted on board

tried under full working conditions & found satisfactory.

Survey Fee

When applied for

19

Travelling Expenses (if any)

When received

19

2/5ths Boiler Fee

+ 20% Building Fee

£ 33-6-6

Date