

REPORT ON BOILERS.

No. 18225

Received at London Office

25 DEC 1941

Date of writing Report

22/12/1941

When Banded in at Local Office

22/12/1941

Port of

W. Hartlepool

To in Survey held at

Hartlepool

Date, First Survey

30th April, 1941

(Number of Visits 85)

Gross Tons

Net Tons

on the

R.F.A. "EAGLESDALE"

ilt at

By whom built

Furness Shipbuilding Co. Ltd.

Yard No. 339

When built 1941

ines made at

Hartlepool

By whom made

Richardson Westgarth Co.

Engine No. 2711

When made 1941

lers made at

"

By whom made

" " "

Boiler No. 2711

When made 1941

iminal Horse Power

674

Owners

Ministry of War Transport.

Port belonging to

Middlesbrough.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Co. of Scotland

(Letter for Record S)

tal Heating Surface of Boilers

10020 Sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

oil

and Description of Boilers

3 L.E. Multitubular

Working Pressure

220 LB/SQ IN

sted by hydraulic pressure to

380 LB/SQ IN

Date of test 6/12/41

No. of Certificate 3951

Can each boiler be worked separately

Yes

ea of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2-2 1/2" Spring loaded high lift

ea of each set of valves per boiler

(per Rule 8.65" as fitted 9.8")

Pressure to which they are adjusted

225 LB/SQ IN

Are they fitted with easing gear

Yes

case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Is oil fuel carried in the double bottom under boilers

Yes

allest distance between boilers or uptakes and bunkers or woodwork

3'-9"

Is the bottom of the boiler insulated

Yes

allest distance between shell of boiler and tank top plating

2'-6"

argest internal dia. of boilers

16'-2 3/32"

Length 12'-6"

Shell plates: Material

Steel

Tensile strength

30/34

ickness

1 3/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

DR L

ing, seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1 1/2"

Pitch of rivets

4"

ercentage of strength of circ. end seams

plate 62.5 rivets 44.7

Percentage of strength of circ. intermediate seam

plate rivets

ercentage of strength of longitudinal joint

plate 85.1 rivets 86.7 combined 87.5

ickness of butt straps

outer 1 5/32" inner 1 9/32"

No. and Description of Furnaces in each Boiler

3 Deighton (gourlay necks)

aterial

Steel

Tensile strength

26/30

Smallest outside diameter

3'-11 23/32"

ength of plain part

top bottom

Thickness of plates

crown 4 7/16" bottom 4 7/16"

Description of longitudinal joint

welded

imensions of stiffening rings on furnace or c.e. bottom

nd plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 13/32"

Pitch of stays

22 1/4" x 18 1/2"

ow are stays secured

double nuts

ube plates: Material

front back

Steel

Tensile strength

26/30

Thickness

1 5/16"

7/8"

ean pitch of stay tubes in nests

9 5/8"

Pitch across wide water spaces

14 1/2" x 7 1/4"

irders to combustion chamber tops: Material

Steel

Tensile strength

29/33

Depth and thickness of girder

centre

2-11 3/4" x 1"

Length as per Rule

3'-10 1/2"

Distance apart

9"

No. and pitch of stays

each

3 @ 11 1/8"

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

1 13/16"

Back

2 3/32"

Top

1 13/16"

Bottom

2 9/32"

itch of stays to ditto: Sides

9" x 11 1/8"

Back

9" x 8"

Top

9" x 11 1/8"

Are stays fitted with nuts or riveted over

nuts

ront plate at bottom: Material

Steel

Tensile strength

26/30

Tensile strength

26/30

Thickness

1 5/16"

ickness

1 5/16"

Lower back plate: Material

Steel

Are stays fitted with nuts or riveted over

nuts

itch of stays at wide water space

15 3/8" x 8"

Tensile strength

28/32

lain stays: Material

Steel

Tensile strength

26/30

Diameter

At body of stay, 3 1/2"

No. of threads per inch

6

crew stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, 2" + 1 3/4"

No. of threads per inch

9

ickness

At turned off part, 2" + 1 3/4"

No. of threads per inch

9

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Are the stays drilled at the outer ends *OK*

Margin stays: Diameter { At turned off part, $2\frac{1}{4}"$
Over threads

No. of threads per inch *9*

Tubes: Material *Steel* External diameter { Plain } $2\frac{1}{2}"$ Thickness { $5\frac{1}{8}"$ } No. of threads per inch *9*
Pitch of tubes $4" \times 3\frac{5}{8}"$ Stay } $2\frac{1}{2}"$ Manhole compensation: Size of opening in
shell plate $16\frac{1}{2}" \times 20\frac{1}{2}"$ Section of compensating ring $18\frac{3}{8}" \times 1\frac{33}{64}"$ No. of rivets and diameter of rivet holes $34 - 1\frac{9}{16}"$
Outer row rivet pitch at ends $10\frac{1}{2}"$ Depth of flange if manhole flanged $3\frac{1}{4}"$ Steam Dome: Material *✓*
Tensile strength *✓* Thickness of shell *✓* Description of longitudinal joint *✓*
Diameter of rivet holes *✓* Pitch of rivets *✓* Percentage of strength of joint { Plate *✓*
Rivets *✓*
Internal diameter *✓* Thickness of crown *✓* No. and diameter of
stays *✓* Inner radius of crown *✓* Diameter of rivet holes and pitch
How connected to shell *✓* Size of doubling plate under dome *✓*
of rivets in outer row in dome connection to shell

Type of Superheater *B. & L. Type supplied by C. P. & Marine Ltd.* Manufacturers of { Tubes *Stewart & Lloyd*
Steel forgings *"*
Steel castings *✓*

Number of elements *36* Material of tubes *S.D. Steel* Internal diameter and thickness of tubes $1.273" \times 7/8"$
Material of headers *S.D. Steel* Tensile strength $26/28$ Thickness $1"$ Can the superheater be shut off and
the boiler be worked separately *Yes* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Yes*
Area of each safety valve $3.1416 \square"$ Are the safety valves fitted with easing gear *Yes*
Pressure to which the safety valves are adjusted 225 lb./sq. in. Hydraulic test pressure:
tubes 1500 lb./sq. in. Headers 660 lb./sq. in. and after assembly in place 660 lb./sq. in. Are drain cocks on
valves fitted to free the superheater from water where necessary *Yes*

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *For RICHARDSONS, WESTGARTH & CO. LIMITED.*
The foregoing is a correct description,
H. E. J. Morgan Manufacturer
DIRECTOR

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - }

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *16/10/37*

Total No. of visits

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *R.W. 27/10*

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

The boilers have been constructed under Special Survey & in accordance with the approved plans for a working pressure of 220 lb./sq. in. The materials & workmanship have been found good. Upon completion the boilers were tested with an hydraulic pressure of 380 lb./sq. in. & found sound & tight. These boilers have been forwarded to Haverton Hill. Boilers fitted aboard & found satisfactory under working conditions. The Safety Valves have been adjusted under steam to 225 lb./sq. in. on completion & found in order with the Rule Requirements. Oil fuel burning installation satisfactory under working conditions & found satisfactory.

Survey Fee ... £ *See Rpt 4* When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Committee's Minute *TUE. 27 JAN 1942*

Assigned *See Mdb for 17179*

Clive Bell
Engineer Surveyor to Lloyd's Register of Shipping.

L. Norman Stuart



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