

REPORT ON BOILERS.

No. 13449

17 OCT 1928

Received at London Office

Date of writing Report 16.10.28 When handed in at Local Office 16.10.28 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON.

Date, First Survey

See sketch report.

Last Survey

18.10.1928.

No. on the ship 558 Sup. sc. "ISLEWORTH"

(Number of Visits)

Gross 4908
Net 2966

Master Built at Blyth By whom built Cowper D.D.S.B. Co. Yard No. 235 When built 1928.

Engines made at STOCKTON By whom made Blair & Co (1926) Ltd Engine No. 1980 When made 1928

Boilers made at do. By whom made do. Boiler No. 1980 When made 1928.

Nominal Horse Power 506 Owners Dalgliesh S.S. Co Ltd. Port belonging to Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons.

(Letter for Record S.)

Total Heating Surface of Boilers

4413 sq ft

Is forced draught fitted Yls

Coal or Oil fired Coal.

No. and Description of Boilers

3 S.B.

Working Pressure 180 lbs.

Tested by hydraulic pressure to

320 lbs.

Date of test

4.4.28

No. of Certificate

6628.

Can each boiler be worked separately Yls.

Area of Firegrate in each Boiler

59.5 sq ft

No. and Description of safety valves to each boiler

7.92 9

Pair Coxburns Improved High Lift

Area of each set of valves per boiler

per Rule 7.92 9
as fitted 7.95 9

Pressure to which they are adjusted

180 lbs.

Are they fitted with easing gear Yls.

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

Yls.

Smallest distance between boiler uptakes and bunkers

6'-6"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

1'-9"

Is the bottom of the boiler insulated

No.

Largest internal dia. of boilers

14'-9 9/16"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

28/32

Thickness

1 7/32"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

inter.

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1 5/16"

long. seams 1 1/4"

Pitch of rivets

4 1/4"

8 5/8"

Percentage of strength of circ. end seams

plate 69.1

rivets 42.8

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.5

rivets 90.

combined 89.

Working pressure of shell by Rules

181 lbs.

Thickness of butt straps

outer 1 5/16"

inner 1 1/16"

No. and Description of Furnaces in each Boiler

3 Corrugated

Material

Steel

Tensile strength

26/30.

Smallest outside diameter

3'-7 7/8"

Length of plain part

top

bottom

Thickness of plates

crown 9/16"

bottom

Description of longitudinal joint

Weld.

Dimensions of stiffening rings on furnace or c.c. bottom

Yls.

Working pressure of furnace by Rules

187 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30.

Thickness

1 3/16"

Pitch of stays

19 1/2" x 19 1/2"

How are stays secured

D.N.W.

Working pressure by Rules

192 lbs.

Tube plates: Material

front Steel

back

Tensile strength

26/30.

Thickness

3 1/32"

13/16"

Mean pitch of stay tubes in nests

9 3/8"

Pitch across wide water spaces

13 1/2"

Working pressure

front 196 lbs.

back 270 "

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

At centre

8" x 11/16" (double)

Length as per Rule

2'-6 1/2"

Distance apart

8 3/4"

No. and pitch of stays

In each

2 - 9 3/4"

Working pressure by Rules

188 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30.

Thickness: Sides

11/16"

Back

21/32"

Top

11/16"

Bottom

11/16"

Pitch of stays to ditto: Sides

9 3/4" x 8 1/4"

Back

9 3/8" x 8 1/2"

Top

9 3/4" x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

192 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30.

Thickness

31/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

3/32"

Pitch of stays at wide water space

14" x 9 3/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

241 lbs.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

or Over threads

3 3/8"

No. of threads per inch

6.

Area supported by each stay

373 sq in

Working pressure by Rules

197 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

or Over threads

1 3/4"

No. of threads per inch

8

Area supported by each stay

839

Lloyd's Register
Foundation
W79-0046

Working pressure by Rules 218 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8"
 No. of threads per inch 8 Area supported by each stay 100 sq Working pressure by Rules 213 lbs
 Tubes: Material iron External diameter { Plain 2 1/2" to 2 7/8" Thickness { 9/16" No. of threads per inch 9
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules p. 230. S = 270 lbs Manhole compensation: Size of opening in
 shell plate 16" x 12" Section of compensating ring 7" x 1 7/32" No. of rivets and diameter of rivet holes 28 - 1 1/16"
 Outer row rivet pitch at ends 9" Depth of flange if manhole flanged ✓ 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
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of
 stays Inner radius of crown Working pressure by Rules
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of { Tubes
 Number of elements Material of tubes Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut off and
 the boiler be worked separately Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:
 tubes, castings and after assembly in place Are drain cocks or valves fitted
 to free the superheater from water where necessary
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yls.

The foregoing is a correct description,
 For BLAIR & CO. (1926) LIMITED.

W. H. M. A. M. Manufacturer.
 SECRETARY.

Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - - }
 See Machy Report
 Are the approved plans of boiler and superheater forwarded herewith Yls.
 (If not state date of approval.)
 Total No. of visits

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

The materials and workmanship are good.
 These boilers have been built under special survey in accordance
 with the Rules and approved Plan, securely fitted aboard and their
 safety valves have been adjusted and tested under steam with
 satisfactory results.

Survey Fee ... £ See Machy Report
 Travelling Expenses (if any) £
 When applied for, 192
 When received, 192

W. H. M. A. M.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 2 NOV 1923

Assigned See Minute on
 Indk Rpt 13449

