

REPORT ON BOILERS.

No. 29601

Received at London Office

- 7 JAN 1928

Date of writing Report

192

When handed in at Local Office

6 JAN 1928

Port of SunderlandNo. in
Reg. Book.

Survey held at

Sunderland

Date, First Survey

Last Survey

Dec. 28 1927

1133 on the

S. S. "HOLYSTONE"

(Number of Visits

Gross 5462
Net 3336

Master

Built at

Sunderland

By whom built

Messrs Short Bros LtdYard No. 427When built 1927

Engines made at

Sunderland

By whom made

Messrs John Dickinson & Sons LtdEngine No. 885When made 1927

Boilers made at

Sunderland

By whom made

Messrs John Dickinson & Sons LtdBoiler No. 1090When made 1927

Nominal Horse Power

332

Owners

Northumbrian Shipping Co Ltd

Port belonging to

NewcastleMULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel

The Steel Company of Scotland Limited(Letter for Record (S))

Total Heating Surface of Boilers

1071 sq ft

Is forced draught fitted

No

Coal or Oil fired

coal

No. and Description of Boilers

One - Single Ended Marine type Corrugated furnaces

Working Pressure

220 lbs sq

Tested by hydraulic pressure to

380 lbs sq

Date of test

15-9-27

No. of Certificate

3954

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

35.8 sq ft

No. and Description of safety valves to each boiler

Two - Direct Spring loaded

Area of each set of valves per boiler

5.696 sq ft

as fitted

6.283 sq ft

Pressure to which they are adjusted

225 lbs

Are they fitted with easing gear

Yes

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

NoNon-return valve fitted

Smallest distance between boilers

3' 9"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

Fitted in Tween Deck

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

10' 9 1/16"

Length

10' 6" (FULL)

Shell plates: Material

Steel

Tensile strength

29 3/4 to 33 3/4 tons

Thickness

1 1/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

3 1/8"

Long. seams

I.R.O.B.S.

Diameter of rivet holes in

1 1/8"

Pitch of rivets

7 13/16"

Percentage of strength of circ. end seams

64

Percentage of strength of circ. intermediate seam

50.8

Percentage of strength of longitudinal joint

85.6

Working pressure of shell by Rules

220.5 lbs sq

Thickness of butt straps

13/16"

No. and Description of Furnaces in each Boiler

Two - Corrugated Deighton type

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

2' 10 5/16"

Length of plain part

17 1/32"

Thickness of plates

3 1/32"

Description of longitudinal joint

Welded

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

Yes

Working pressure of furnace by Rules

224 lbs sq

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

3 1/32"

Pitch of stays

15" x 14 1/2"

How are stays secured

Double Nuts & Washers

Working pressure by Rules

234 lbs sq

Tube plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness

3 1/32"

Mean pitch of stay tubes in nests

9"

Pitch across wide water spaces

13 3/4"

Working pressure

226 lbs sq (W.W. space)

Orders to combustion chamber tops: Material

Steel

Tensile strength

28 to 30 tons

Depth and thickness of girder

7 1/2"

Centre

6 1/4" x 2 1/4"

Length as per Rule

30"

Distance apart

7 1/2"

No. and pitch of stays

each

2 x 10"

Working pressure by Rules

231 lbs sq

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

3/4"

Back

25/32"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

9 7/8" x 9"

Back

10" x 9 1/8"

Top

10" x 7 1/2"

Are stays fitted with nuts or riveted over

Fitted with nuts

Working pressure by Rules

222 lbs sq

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

3 1/32"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 3/32"

Pitch of stays at wide water space

14" x 9"

Are stays fitted with nuts or riveted over

Fitted with nuts

Working Pressure

345 lbs sq

Main stays: Material

Steel

Tensile strength

28 to 30 tons

Diameter

2 5/8"

No. of threads per inch

6

Area supported by each stay

217.5 sq

Working pressure by Rules

26 to 30 tons

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Backs

91.25 sq

Diameter

1 7/8"

No. of threads per inch

9

Area supported by each stay

75 sqLloyd's Register
Foundation

Working pressure by Rules *Backs 233 lbs. 0* Are the stays drilled at the outer ends *No* Margin stays: Diameter *At turned off part, 2"*
 No. of threads per inch *9* Area supported by each stay *106.950* Working pressure by Rules *232 lbs. 0*
 Tubes: Material *Wrought Iron* External diameter *Plain 3 1/4"* Thickness *7.4.5.* No. of threads per inch *9*
 Pitch of tubes *4 1/2" x 4 1/2"* Working pressure by Rules *Plain Tubes 280 lbs. 0* Manhole compensation: Size of opening in
 shell plate *16" x 12"* Section of compensating ring *8 1/4" x 1 1/2"* No. of rivets and diameter of rivet holes *30 @ 1 1/2" dia.*
 Outer row rivet pitch at ends *7 13/16 (max)* 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 *Rivets* 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 Steel castings
 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

Yes
John Dickinson & Sons, Limited.
 The foregoing as a correct description,
W. Dickinson Manufacturer.
Director.

Dates of Survey *Please see Mch'y Rpt.*
 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.)
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
The materials and workmanship are good.
The Donkey Boilers has been constructed under Special Survey and satisfactorily fitted in the vessel.
For notation see Machinery Report.

Survey Fee ... *Charged on Machinery Report* When applied for, 192
 Travelling Expenses (if any) £ When received, 192

A. T. Griffith.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUES. 17 JAN 1928*
 Assigned *See Mch'y Rpt. attached*