

REPORT ON BOILERS.

No. 44612

- 7 APR 1934

Received at London Office

8 APR 1934

Date of writing Report

5-4-1934

When handed in at Local Office

10

Port of

HULL

No. in
Reg. Book.

Survey held at

Hull.

Date, First Survey

24th Jan. 1934

Last Survey

26th March, 1934

on the

Steel S.S.

"BRONTES"

(Number of Visits

10.)

Gross

Tons

Net

Master

Built at

Buxley.

By whom built

Cook, Lillie & Grinnell

Yard No.

590

When built 1934-5

Engines made at

Hull.

By whom made

Charles D. Holmes & Co. Ltd

Engine No.

1455

When made

1934

Boilers made at

do

By whom made

ditto

Boiler No.

1455

When made

1934

Nominal Horse Power

Owners

Hentiksen & Co. Ltd

Port belonging to

Hull.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby Iron Co. Ltd., Scunthorpe

(Letter for Record

"S")

Total Heating Surface of Boilers

1940 sq. ft.

Is forced draught fitted

No.

Coal or Oil fired

Coal.

No. and Description of Boilers

One, single ended, return tube.

Working Pressure

210 lbs/sq. in.

Tested by hydraulic pressure to

365 lbs/sq. in.

Date of test

2-3-34

No. of Certificate

3084

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

54 sq. ft.

No. and Description of safety valves to each boiler

Two - spring-loaded.

Area of each set of valves per boiler

per Rule

10.8

as fitted

11.88

Pressure to which they are adjusted

210 lbs/sq. in.

Are they fitted with easing gear

Yes.

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

✓

Smallest distance between boilers or uptakes and bunkers or woodwork

9 1/4"

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

✓

Largest internal dia. of boilers

174"

Length

10'-8"

Shell plates: Material

Steel

Tensile strength

29.33 tons/sq. in.

Thickness

43/32"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end D.B. lap.

long. seams

T.R. - D.B.S.

Diameter of rivet holes in

circ. seams

1 3/8"

long. seams

1 3/8"

Pitch of rivets

3.75"

9.25"

Percentage of strength of circ. end seams

plate

63.2%

rivets

46.7%

Percentage of strength of circ. intermediate seam

plate

85.13%

rivets

86.8%

Percentage of strength of longitudinal joint

plate

85.13%

rivets

86.8%

combined

87.6%

Working pressure of shell by Rules

212 lbs/sq. in.

Thickness of butt straps

outer

33/32"

inner

31/32"

No. and Description of Furnaces in each Boiler

3 - plain.

Material

Steel

Tensile strength

26/30 tons/sq. in.

Smallest outside diameter

42.5"

Length of plain part

top

75"

bottom

75"

Thickness of plates

crown

53/64"

bottom

53/64"

Description of longitudinal joint

Weld.

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

✓

Working pressure of furnace by Rules

212 lbs/sq. in.

End plates in steam space: Material

Steel

Tensile strength

26/30 tons/sq. in.

Thickness

38/32"

Pitch of stays

19 1/4" x 18 1/4"

How are stays secured

Double nuts & washers.

Working pressure by Rules

212 lbs/sq. in.

Tube plates: Material

front

Steel

back

"

Tensile strength

26/30 tons/sq. in.

Thickness

30/32"

28/32"

Mean pitch of stay tubes in nests

10.7"

Pitch across wide water spaces

14"

Working pressure

front 223 lbs/sq. in.

back 212 lbs/sq. in.

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 tons/sq. in.

Depth and thickness of girder

at centre

10" x 56/32"

Length as per Rule

36.219"

Distance apart

9"4 9 1/2"

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

227 lbs/sq. in.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons/sq. in.

Thickness: Sides

24/32"

Back

23/32"

Top

23/32"

Bottom

24/32"

Pitch of stays to ditto: Sides

10" x 8 1/2"

Back

9 3/8" x 8 1/4"

Top

9 1/2" x 8"

Are stays fitted with nuts or riveted over

Nuts.

Working pressure by Rules

215 lbs/sq. in.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons/sq. in.

Thickness

30/32"

Lower back plate: Material

Steel

Tensile strength

26/30 tons/sq. in.

Thickness

28/32"

Pitch of stays at wide water space

14 1/4" x 8 1/4"

Are stays fitted with nuts or riveted over

Nuts.

Working Pressure

211 lbs/sq. in.

Main stays: Material

Steel

Tensile strength

28/32 tons/sq. in.

Diameter

At body of stay,

or

Over threads

3 1/4"

No. of threads per inch

8.

Area supported by each stay

360 sq. in.

Working pressure by Rules

220 lbs/sq. in.

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq. in.

Diameter

At turned off part,

or

Over threads

1 3/4"

No. of threads per inch

10.

Area supported by each stay

83 sq. in.

Working pressure by Rules 212 lbs/sq in Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turn off part, 1 7/8" x 2" or Over threads 1 7/8" x 2"
No. of threads per inch 10 Area supported by each stay 98 sq in Working pressure by Rules 217 lbs
Tubes: Material Iron External diameter { Plain 3 1/2" Thickness { 8 N.G. No. of threads per inch 9
Pitch of tubes 4 3/4" Working pressure by Rules 215 lbs/sq in Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 38-3/25" x 43/32" No. of rivets and diameter of rivet holes 52 @ 1 1/2"
Outer row rivet pitch at ends 10-46 Depth of flange if manhole flanged 3 1/4" (dome manhole) Steam Dome: Material Steel
Tensile strength 26/30 tons/sq in Thickness of shell 24/32" Description of longitudinal joint S.R. - Lap
Diameter of rivet holes 1 1/2" Pitch of rivets 2-25" Percentage of strength of joint { Plate 54%
Rivets 43.8%
Internal diameter 33" Working pressure by Rules 230 lbs/sq in Thickness of crown 28/32" No. and diameter of
stays 2 @ 2 1/4" Inner radius of crown ✓ Working pressure by Rules ✓
How connected to shell Welded Size of doubling plate under dome 57.5" x 43/32" Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 1 1/2" dia - 10-46" pitch

Type of Superheater The Superheater Co. Ltd. Manufacturers of { Tubes ✓
Steel castings ✓
Number of elements 41 Material of tubes Steel Internal diameter and thickness of tubes 17 1/4" x 3 7/8"
Material of headers Forged Steel Tensile strength ✓ Thickness 15/8" 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 1.76 sq in Are the safety valves fitted with easing gear Yes Working pressure as per
Rules Approved for 210 lbs/sq in Pressure to which the safety valves are adjusted 215 lbs/sq in Hydraulic test pressure:
tubes 1000 lbs/sq in, castings 630 lbs/sq in and after assembly in place 420 lbs/sq in Are drain cocks or 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 Yes

The foregoing is a correct description,
FOR CHARLES D. HOLMES & CO., LTD.
Manufacturer.

Dates { During progress of 1934 JAN. 24-30 Feb. 5-12 20-26 Are the approved plans of boiler and superheater forwarded herewith Yes
of Survey { work in shops - - Mar. 2-16 (If not state date of approval.)
while { During erection on 1934 Mar. 22-26
building { board vessel - - -
Total No. of visits 10

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Orinval. Rpt No.

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

See machinery report

Survey Fee ... £ ... When applied for, ... 19 ...
Travelling Expenses (if any) £ ... When received, ... 19 ...

Committee's Minute

Assigned

FRI 13 APR 1934

See other Rpt
(Hul 44612)



© 2020

Lloyd's Register
Foundation