

REPORT ON BOILERS.

No. 45001

Date of writing Report

When handed in at Local Office

- 2 AUG 1934

Received at London Office

Port of

HULL

- 3 AUG 1934

No. in Reg. Book.

Survey held at

Hull

Date, First Survey

29.5.34

Last Survey

24.7.

1934

on the

Steel Sc K "Aragonite"

(Number of Visits)

Gross

314.80

Tons

Net 137.98

Master

Built at

Beverley

By whom built

Cook, Welton & Gemmell Ltd.

Card No.

594

When built 1934-7.

Engines made at

Hull

By whom made

Charles S. Holmes & Co. Ltd.

Engine No.

1462

When made 1934.

Boilers made at

Hull

By whom made

Charles S. Holmes & Co. Ltd.

Boiler No.

1462

When made 1934

Nominal Horse Power

89.

Owners

Messrs Kingston Steam Trawling Co. Ltd.

Port belonging to

Hull.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby Iron Co. Ltd.

Sunderland

(Letter for Record)

"S"

Total Heating Surface of Boilers

1606 sq feet

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended - return tube.

Working Pressure

200 lb

Tested by hydraulic pressure to

350 lb

Date of test

9-7-34

No. of Certificate

3892

Can each boiler be worked separately

Area of Firegrate in each Boiler

49 sq ft

No. and Description of safety valves to each boiler

Two, spring loaded.

Area of each set of valves per boiler

{ per Rule

9.35 sq"

{ as fitted

9.8 sq"

Pressure to which they are adjusted

200 lb

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

7 3/4"

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

162"

Length

10' 6"

Shell plates: Material

Steel

Tensile strength

29/33 tons

Thickness

38.5/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

{ end

B.R.

Long. seams

1 R. - 8/32"

Diameter of rivet holes in

{ circ. seams

1 9/32"

{ long. seams

1 1/4"

Pitch of rivets

3.375"

8.5625"

Percentage of strength of circ. end seams

{ plate

62

{ rivets

51

Percentage of strength of circ. intermediate seam

{ plate

✓

{ rivets

✓

Percentage of strength of longitudinal joint

{ plate

85.7

{ rivets

88.3

{ combined

88.4

Working pressure of shell by Rules

203 lb

Thickness of butt straps

{ outer

30/32"

{ inner

38/32"

No. and Description of Furnaces in each Boiler

Three plain

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

40.5"

Length of plain part

{ top

82"

{ bottom

82"

Thickness of plates

{ crown

26/32"

{ bottom

26/32"

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

210 lb

and plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

35/32"

Pitch of stays

18" x 17"

How are stays secured

Double nuts and washers

Working pressure by Rules

216 lb

Tube-plates: Material

{ front Steel

Tensile strength

26/30 tons

Thickness

30/32"

Lean pitch of stay tubes in nests

10.7"

Pitch across wide water spaces

13.5"

Working pressure

{ front

220 lb

{ back

219 lb

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

centre

8.5" x 56/32"

Length as per Rule

32.75"

Distance apart

9"

No. and pitch of stays

each

3 @ 8 1/4"

Working pressure by Rules

209 lb

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

22/32"

Back

22/32"

Top

21/32"

Bottom

22/32"

Pitch of stays to ditto: Sides

9 1/2" x 8 1/4"

Back

9 1/4" x 8 1/4"

Top

9" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

204 lb

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

30/32"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

27/32"

Pitch of stays at wide water space

13 1/4" x 9 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

222 lb

Main stays: Material

Steel

Tensile strength

28/32"

Diameter

{ At body of stay,

3"

{ Over threads

No. of threads per inch

8

Area supported by each stay

306 sq"

Working pressure by Rules

219 lb

Screw stays: Material

Steel

Tensile strength

26/30 tons

Diameter

{ At turned off part,

1 7/8" and 1 1/4"

{ Over threads

No. of threads per inch

10

Area supported by each stay

81 sq"

Lloyd's Register Foundation

W413-0078

Working pressure by Rules 222 #0 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8"
Over threads
No. of threads per inch 10 Area supported by each stay 101 #0 Working pressure by Rules 210 #0
Tubes: Material Iron External diameter { Plain 3 1/2" Thickness { 8 L.S.G. No. of threads per inch 9
Stay 3 1/2"
Pitch of tubes 4 3/4" Working pressure by Rules 215 #0 Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 1-203" x 57" dia No. of rivets and diameter of rivet holes 59 @ 1 1/4"
Outer row rivet pitch at ends 10.5" Depth of flange if manhole flanged 10.5" Steam Dome: Material Steel
Tensile strength 26/30 tons Thickness of shell 24/32" Description of longitudinal joint S.R. lap.
Diameter of rivet holes 1 1/32" Pitch of rivets 2.25" Percentage of strength of joint { Plate 54.
Rivets 43.8.
Internal diameter 33" Working pressure by Rules 229 #0 Thickness of crown 28/32" No. and diameter of
stays 2 @ 2 1/4" Inner radius of crown 1-203" x 57" dia Working pressure by Rules 210 #0
How connected to shell Riveted Size of doubling plate under dome 1-203" x 57" dia Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 1 1/4" @ 10.3"

Type of Superheater _____ Manufacturers of { Tubes _____
Steel castings _____
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 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 work in shops - - -
of Survey while building { During erection on board vessel - - -
Are the approved plans of boiler and superheater forwarded herewith yes
(If not state date of approval.)
Total No. of visits 1

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. "Andradite" 44506.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
Please see Machinery Report herewith.

The Boiler plan forwarded herewith refers also the boiler of the
new S.L. "Achroite" (Boiler No 1463) to be reported shortly.

Survey Fee ... £ : : When applied for, 10
Travelling Expenses (if any) £ : : When received, 10

C. Moffatt and J. H. Mackenzie
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute - FRI. 10 AUG 1937

Assigned See other 3
Jul. 45001