

REPORT ON BOILERS.

No. 45038

Received at London Office

16 AUG 1934

Date of writing Report

19

When handed in at Local Office

10

Port of

No. in Survey held at
g. Book.

Hull

Date, First Survey

29th May

Last Survey

4th Aug 1934

(Number of Visits)

Gross 313.82

Net 157.86

on the

Steel Sc K " Achroite "

Master

Built at

Beverley

By whom built

Lock Welton & Gemmell

When built

1934.8

Engines made at

Hull

By whom made

Charles D. Holmes & Co. Ltd.

Engine No.

1463

When made

1934

Boilers made at

Hull

By whom made

Charles D. Holmes & Co. Ltd.

Boiler No.

1463

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.

Scunthorpe

(Letter for Record

"S")

Total Heating Surface of Boilers

1606 sq. ft.

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended - return tube.

Working Pressure

200 lb/sq. in.

Tested by hydraulic pressure to

350 lb/sq. in.

Date of test

20.7.34

No. of Certificate

3894

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. ft.
as fitted 9.8

Pressure to which they are adjusted

200 lb/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

4 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

162"

Length

10'6"

Shell plates: Material

Steel

Tensile strength

29/33 tons/sq. in.

Thickness

38.5/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

OR

Long. seams

SR. D.S.S.

Diameter of rivet holes in

circ. seams

1 9/32"

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/sq. in.

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/sq. in.

Smallest outside diameter

40.5 sq. inches

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/sq. in.

End plates in steam space: Material

Steel

Tensile strength

26/30"

Thickness

35/32"

Pitch of stays

18x17"

How are stays secured

Double nuts & washers

Working pressure by Rules

216 lb/sq. in.

Tube plates: Material

front Steel
back "

Tensile strength

26/30 tons/sq. in.

Thickness

30/32"
28/32"

Lean pitch of stay tubes in nests

10.7"

Pitch across wide water spaces

13.5"

Working pressure

front 220 lb/sq. in.
back 219 lb/sq. in.

Orders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons/sq. in.

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/sq. in.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons/sq. in.

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 3/4"

Top

9 x 8 1/4"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

204 lb/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

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/sq. in.

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. inches

Working pressure by Rules

219 lb/sq. in.

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq. in.

Diameter

At turned off part, 1 7/8"
Over threads

No. of threads per inch

10

Area supported by each stay

81 sq. inches

003474-003478-0063

Lloyd's Register
Foundation

Working pressure by Rules 222 #0 Are the stays drilled at the outer ends no Margin stays: Diameter 1 7/8"
No. of threads per inch 10 Area supported by each stay 101 sq inches Working pressure by Rules 210 #0
Tubes: Material Iron External diameter { Plain 3 1/2" Thickness 5/16" No. of threads per inch 9
Pitch of tubes 4 3/4" Working pressure by Rules 215 #0 Manhole compensation: Size of opening
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 24/32" Steam Dome: Material Steel
Tensile strength 26/10 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
stays 2 @ 2 1/4" Inner radius of crown 28/32" Working pressure by Rules 28/32"
How connected to shell Riveted Size of doubling plate under dome 28/32" 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
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
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
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 (If not state date of approval.)
Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Aragonite" 45001

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
Please see machinery report 4.
The plan of this boiler was forwarded with the report on "Aragonite".

Survey Fee £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 24 AUG 1934
Assigned See other rpt
Shul. J.B. 45038