

REPORT ON BOILERS.

No. 45543

5 MAR 1935

Received at London Office - 8 MAR '35

Date of writing Report

19

When handed in at Local Office

19

Port of

HULL

No. in
g. Book.

Survey held at

Hull

Date, First Survey

23rd Nov 1934

Last Survey

28th Feb. 1935

(Number of Visits

✓

Gross

448.04

Tons

Net

173.71

on the Steel S. K. "Kingston Chrysolite"

Master

Built at

Beverley

By whom built

Book Walton & Gemmell Ltd.

Yard No.

599

When built

1935.2

Engines made at

Hull

By whom made

Charles D. Holmes & Co. Ltd.

Engine No.

1472

When made

1935

Boilers made at

Hull

By whom made

Charles D. Holmes & Co. Ltd.

Boiler No.

1472

When made

1935

Nominal Horse Power

117

Owners

Kingston Steam Trawling Co. Ltd.

Port belonging to

Hull

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby - Frodingham Steel Co. Ltd.

(Letter for Record

"S"

Total Heating Surface of Boilers

1940 sq. ft.

Is forced draught fitted

ho.

Coal or Oil fired

coal

No. and Description of Boilers

One single ended return tube

Working Pressure

215 #/sq. in.

Tested by hydraulic pressure to

373 #/sq. in.

Date of test

14th Jan 1935

No. of Certificate

3908

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

53.74 sq. ft.

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

per Rule

10.55 sq. in.

Pressure to which they are adjusted

215 #/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"

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

1 3/8"

Are the shell plates welded or flanged

✓

Description of riveting: circ. seams

end

SR.

Long. seams

Y.R. S.R.S.

Diameter of rivet holes in

circ. seams

1 3/8"

Pitch of rivets

3 1/4"

Percentage of strength of circ. end seams

plate

63.2

rivets

72.4

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

85.13

rivets

86.8

Working pressure of shell by Rules

217 #/sq. in.

Thickness of butt straps

outer

1 1/16"

inner

1 3/16"

No. and Description of Furnaces in each Boiler

Three plain.

Material

Steel

Tensile strength

26-30 tons/sq. in.

Smallest outside diameter

42.5"

Length of plain part

top

72"

bottom

✓

Thickness of plates

crow

53"

bottom

64"

Description of longitudinal joint

Welded.

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

Working pressure of furnace by Rules

221 #/sq. in.

End plates in steam space: Material

Steel

Tensile strength

26-30 tons/sq. in.

Thickness

1 7/32"

Pitch of stays

19 3/4" x 18 1/4"

How are stays secured

Double nuts and washers

Working pressure by Rules

221 #/sq. in.

End plates: Material

front

Steel

back

"

Tensile strength

26-30 tons/sq. in.

Thickness

15/16"

7/8"

Can pitch of stay tubes in nests

10.7"

Pitch across wide water spaces

14"

Working pressure

front

228 #/sq. in.

back

222 #/sq. in.

Orders to combustion chamber tops: Material

Steel

Tensile strength

29-33 tons/sq. in.

Depth and thickness of girder

Centre

10' x 1 3/4"

Length as per Rule

36 1/32"

Distance apart

9' x 9 1/2"

No. and pitch of stays

Each

3 @ 8"

Working pressure by Rules

215 #/sq. in.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons/sq. in.

Thickness: Sides

3/4"

Back

23/32"

Top

23/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

9 1/2" x 8 1/2"

Back

9 3/8" x 8 1/4"

Top

9 1/2" x 8" max.

Are stays fitted with nuts or riveted over

nuts.

Working pressure by Rules

232 #/sq. in. (min)

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons/sq. in.

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons/sq. in.

Thickness

7/8"

Pitch of stays at wide water space

14.25"

Are stays fitted with nuts or riveted over

nuts.

Working Pressure

230 #/sq. in.

Main stays: Material

Steel

Tensile strength

28-32 tons/sq. in.

Diameter

At body of stay,

✓

Over threads

3 1/4"

No. of threads per inch

8

Area supported by each stay

360 sq. in.

Working pressure by Rules

223 #/sq. in.

Screw stays: Material

Steel

Tensile strength

26-30 tons/sq. in.

Diameter

At turned off part,

✓

Over threads

1 3/4" + 1 7/8"

No. of threads per inch

10

Area supported by each stay

77.2 sq. in.

Working pressure by Rules 232# Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 2" + 1 7/8"
No. of threads per inch 10 Area supported by each stay 89 sq in Working pressure by Rules 240#
Tubes: Material Iron External diameter ^{Plain} 3 1/2" Thickness ^{Stay} 5/16" + 5/16" No. of threads per inch 9
Pitch of tubes 4 3/4" Working pressure by Rules 215# Manhole compensation: Size of opening
shell plate 16" x 12" Section of compensating ring 5 1/2" dia x 1 3/8" No. of rivets and diameter of rivet holes 59 @ 1 7/8"
Outer row rivet pitch at ends 10.41" Depth of flange if manhole flanged 3/4" Steam Dome: Material Steel
Tensile strength 26-30 tons Thickness of shell 3/4" Description of longitudinal joint S.R. lap.
Diameter of rivet holes 1 1/2" Pitch of rivets 2 1/4" Percentage of strength of joint ^{Plate} 54.00
Internal diameter 33" Working pressure by Rules 229# Thickness of crown 7/8" No. and diameter
stays 2 @ 2 1/4" Inner radius of crown 10.4" Working pressure by Rules
How connected to shell Riveted Size of doubling plate under dome 5 1/2" x 1 3/8" Diameter of rivet holes and p
of rivets in outer row in dome connection to shell 1 7/8" 10.4"

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 casing gear Working pressure as
Rules Pressure to which the safety valves are adjusted Hydraulic test pressu
tubes, castings and after assembly in place Are drain cocks or valves fi
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.

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

Is this Boiler a duplicate of a previous case yes. If so, state Vessel's name and Report No. "Kingston Cornelian" 44

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built u
special survey and in accordance with the approved plan.
It has been satisfactorily fitted on board, tried under steam
and its safety valves adjusted as stated.

The approved Boiler Plan is being retained for dealing with duplicate
boilers 1473, 4 and 5.

charged on engine report herewith

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

L. Knoffatt.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI 15 MAR 1935

Assigned

See Hnl. J.E. 45543



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Foundation