

REPORT ON BOILERS.

No. 45543

Received at London Office - 8 MAR '35

5 MAR 1935

Date of writing Report

When handed in at Local Office

Port of

HULL

No. in Survey held at

Hull

Date, First Survey

23rd Nov 1934

Last Survey

28th Feb. 1935

g. Book.

on the Steel S.K. "Kingston brysolite"

(Number of Visits ✓)

Gross 448.04
Net 173.71

Master

Built at Beverley

By whom built Cook, Welton & Gemmell^{Ld.}

Yard No. 599 When built 1935.2

Engines made at

Hull

By whom made

Charles D. Holmes & Co. Ld.

Engine No. 1472

When made 1935

Boilers made at

Hull

By whom made

Charles D. Holmes & Co. Ld.

Boiler No. 1472

When made 1935

Nominal Horse Power

117

Owners

Kingston Steam Trawling Co. Ld.

Port belonging to

Hull

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby - Frodingham Steel Co. Ld.

(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

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.

as fitted 11.88

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

2 R.

Long. seams

Y.R. S.R.S.

Diameter of rivet holes in

circ. seams 1 3/8"

long. seams

Pitch of rivets

3 1/4"

9 1/4"

Percentage of strength of circ. end seams

plate 63.2

rivets 72.4

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.13

rivets 86.8

Working pressure of shell by Rules

217 #/sq. in.

Percentage of strength of combined

combined 87.6

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

crowns 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"

Span 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

center 10' x 1 3/4"

Length as per Rule

36 7/32"

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, or 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, or over threads

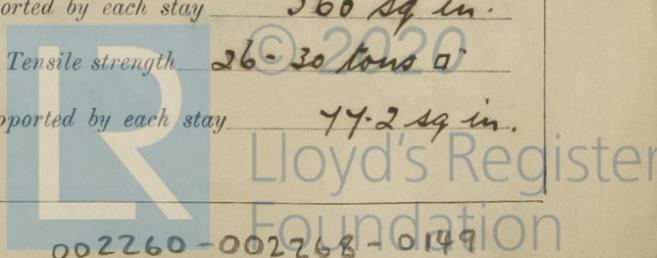
1 3/4" + 1 7/8"

No. of threads per inch

10

Area supported by each stay

77.2 sq. in.



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Working pressure by Rules **232 #0** Are the stays drilled at the outer ends **No** Margin stays: Diameter ^{At turned off part,} **2" + 1 1/8"**
 No. of threads per inch **10** Area supported by each stay **89 sq in** Working pressure by Rules **240 #0**
 Tubes: Material **Iron** External diameter ^{Plain} **3 1/2"** Thickness ^{8 WTG.} **1/16" + 3/8" + 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 **5 1/2" dia x 1 3/8"** No. of rivets and diameter of rivet holes **59 @ 1 3/8"**
 Outer row rivet pitch at ends **10.41"** Depth of flange if manhole flanged **-** 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 #0** Thickness of crown **1/8"** No. and diameter
 stays **2 @ 2 1/4"** Inner radius of crown **-** 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} _____
 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.** Manufacture
[Signature]

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 - - -} **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 £ : _____ When applied for, **19**
 Travelling Expenses (if any) £ **✓** : _____ 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**

