

REPORT ON BOILERS.

No. 45462

11 MAY 1935

Received at London Office

Date of writing Report

10

When handed in at Local Office

10

Port of

No. in Survey held at
Reg. Book

Hull

Date, First Survey

19th Dec. 1934

Last Survey

8th May 1935

(Number of Visits)

Gross 447.94

Tons Net 173.77

on the

Steel & K " Kingston Chrysoberyl "

Master

Built at

Beverley

By whom built

Cook, Welton & Gemmell Ltd

Card No.

602

When built 1935, 4

Engines made at

Hull

By whom made

Charles D. Holmes & Co. Ltd

Engine No.

1475

When made 1935

Boilers made at

Hull

By whom made

Charles D. Holmes & Co. Ltd

Boiler No.

1475

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 { Parkgate Iron & Steel Co. Ltd.
Steel Company of Scotland 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 #0"

Tested by hydraulic pressure to 373 #0 Date of test 21-3-35. No. of Certificate 3913 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 53.7 sq. ft. No. and Description of safety valves to each boiler 2 Spring loaded. ✓

Area of each set of valves per boiler { per Rule 10.55 sq. ft. ✓
as fitted 11.88 Pressure to which they are adjusted 215 #0" 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 ✓

Thickness 1 3/8" ✓ Are the shell plates welded or flanged ✓ Description of riveting: circ. seams { end OK. ✓
inter. 3 3/4" ✓long. seams I.R. S.S.S. ✓ Diameter of rivet holes in { circ. seams 1 3/8" ✓
long. seams Pitch of rivets { 9 1/4" ✓Percentage of strength of circ. end seams { plate 63.20
rivets 72.40 Percentage of strength of circ. intermediate seam { plate
rivets 85.13Percentage of strength of longitudinal joint { plate 86.80
rivets 87.60 Working pressure of shell by Rules 217 #0"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 ✓ Smallest outside diameter 42.5" ✓

Length of plain part { top 42" ✓
bottom Thickness of plates { crown 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 #0"

End plates in steam space: Material Steel Tensile strength 26-30 tons ✓ Thickness 1 7/32" Pitch of stays 19 3/4" x 18 1/4" ✓

How are stays secured Double nuts & washers ✓ Working pressure by Rules 221 #0"

Tube plates: Material { front Steel Tensile strength 26-30 tons ✓
back Thickness { 15/16" ✓
7/8" ✓Mean pitch of stay tubes in nests 10.7" ✓ Pitch across wide water spaces 14" ✓ Working pressure { front 228 #0" ✓
back 222 #0" ✓

Girders to combustion chamber tops: Material Steel Tensile strength 29.33 tons ✓ Depth and thickness of girder

at centre 10" x 1 3/4" ✓ Length as per Rule 36 7/32" ✓ Distance apart 9" x 9 1/2" ✓ No. and pitch of stays

in each 3 @ 8" ✓ Working pressure by Rules 215 #0" Combustion chamber plates: Material Steel

Tensile strength 26-30 tons ✓ 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 1/4" ✓ Are stays fitted with nuts or riveted over nuts. ✓

Working pressure by Rules 232 #0" Front plate at bottom: Material Steel Tensile strength 26-30 tons ✓

Thickness 15/16" ✓ Lower back plate: Material Steel Tensile strength 26-30 tons ✓ Thickness 7/8" ✓

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 230 #0" Main stays: Material Steel Tensile strength 28-32 tons ✓

Diameter { At body of stay, 3 1/4" ✓ No. of threads per inch 8 ✓ Area supported by each stay 360 sq. in. ✓
Over threads Working pressure by Rules 223 #0" Screw stays: Material Steel Tensile strength 26-30 tons ✓Diameter { At turned off part, 1 3/4" x 1 7/8" ✓ No. of threads per inch 10 ✓ Area supported by each stay 77.2 sq. in. ✓
Over threads

Working pressure by Rules 232 #0 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" + 2" or Over threads }
No. of threads per inch 10 Area supported by each stay 89 sq inches Working pressure by Rules 240 #0
Tubes: Material Iron External diameter { Plain } 3 1/2" Thickness { 8 wt } 5/16", 3/8", 7/16" No. of threads per inch 9
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 5 1/2" dia x 1 1/8" 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 I.R. lap
Diameter of rivet holes 1 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54.00 Rivets 43.80 }
Internal diameter 33" Working pressure by Rules 229 #0 Thickness of crown 7/8" No. and diameter of 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" dia x 1 1/8" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 3/8" @ 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 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 of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - - }

See mch'y Rpt.

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

Total No. of visits ✓

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. "Kingston Cairngorm" 45626

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under 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.

Charged on engine report herewith.

Survey Fee £ : ✓

When applied for, 19

Travelling Expenses (if any) £ : ✓

When received, 19

C. Knoffatt

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 14 MAY 1995

Assigned

See Sub J.E. 45762



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