

REPORT ON BOILERS.

No. 45626

4 APR 1935

Received at London Office

-5 APR 1935

of writing Report _____ 19 _____ When handed in at Local Office _____ 10 _____ Port of HULL

in Survey held at Hull Date, First Survey 1st Dec 1934 Last Survey 1st April 1935

on the Steel Sc K. "Kingston Cairngorm" (Number of Visits) Tons { Gross 448.08
Net 173.79

Built at Beverley By whom built Cook, Welton & Gemmill Ltd Yard No. 601 When built 1935.4

By whom made Charles D. Holmes & Co. Ltd Engine No. 1474 When made 1935

By whom made Charles D. Holmes & Co. Ltd Boiler No. 1474 When made 1935

Owners Kingston Steam Trawling Co. Ltd Port belonging to Hull

Final Horse Power 117

MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel { Parkgate Iron & Steel Co. Ltd.
The Steel Company of Scotland Ltd. (Letter for Record "S")

Heating Surface of Boilers 1940 sq feet Is forced draught fitted no. Coal or Oil fired coal.

Description of Boilers One single ended return tube. Working Pressure 215 #0"

Tested by hydraulic pressure to 373 #0" Date of test 15-2-35 No. of Certificate 3910. 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.

Pressure of each set of valves per boiler { per Rule 10.55 sq in
as fitted 11.88 " Pressure to which they are adjusted 215 #0" Are they fitted with easing gear Yes.

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Least distance between boilers or uptakes and bunkers or woodwork 9" Is oil fuel carried in the double bottom under boilers

Least distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Least internal dia. of boilers 174" Length 10' 8" Shell plates: Material Steel Tensile strength 29-33 tons #0"

Thickness 1 3/8" Are the shell plates welded or flanged Description of riveting: circ. seams { end S.P.
inter. 3 3/4"

seams T.R. S.P.S. Diameter of rivet holes in { circ. seams } 1 3/8" Pitch of rivets { 9 1/4"
long. seams }

Percentage of strength of circ. end seams { plate 63.20
rivets 72.40 Percentage of strength of circ. intermediate seam { plate
rivets

Percentage of strength of longitudinal joint { plate 85.13
rivets 86.80 Working pressure of shell by Rules 217 #0"
combined 87.60.

Thickness of butt straps { outer 1 1/6"
inner 1 3/16" No. and Description of Furnaces in each Boiler Three plain

Material Steel Tensile strength 26-30 tons #0" Smallest outside diameter 42.9"

Thickness of plain part { top 72"
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"

Stays in steam space: Material Steel Tensile strength 26-30 tons #0" Thickness 1 7/32" Pitch of stays 19 3/4" x 18 1/4"

Are stays secured Double nuts & washers Working pressure by Rules 221 #0"

Stays: Material { front Steel
back " Tensile strength { 26-30 tons #0" Thickness { 15/16"
7/8"

Pitch of stay tubes in nests 10.7" Pitch across wide water spaces 14" Working pressure { front 228 #0"
back 222 #0"

Stays to combustion chamber tops: Material Steel Tensile strength 29-33 tons #0" Depth and thickness of girder

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

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

Tensile strength 26-30 tons #0" Thickness: Sides 3/4" Back 23/32" Top 23/32" Bottom 3/4"

Dimensions 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" 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 #0"

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26-30 tons #0" Thickness 7/8"

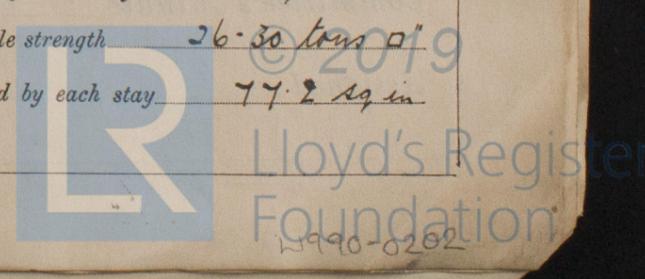
Dimensions of stays at wide water space 14 1/4" x 8 1/4" Are stays fitted with nuts or riveted over nuts.

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

At body of stay, No. of threads per inch 8 Area supported by each stay 360 sq in
Over threads 3 1/4"

Working pressure by Rules 223 #0" Screw stays: Material Steel Tensile strength 26-30 tons #0"

At turned off part, No. of threads per inch 10 Area supported by each stay 77.2 sq in
Over threads 1 3/4" + 1 7/8"



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" + 2 1/4"
 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 WG} 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
 shell plate 16" x 12" Section of compensating ring 5 7/2" 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 sq" Thickness of shell 3/4" Description of longitudinal joint S.R. lap.
 Diameter of rivet holes 1 1/32" 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 7/8" 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 7/2" dia x 1 3/8" Diameter of rivet holes and pit
 of rivets in outer row in dome connection to shell 1 3/8" @ 10.4"

Type of Superheater

Number of elements _____ Material of tubes _____ Tubes _____
 Material of headers _____ Tensile strength _____ Steel castings _____
 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. HUGHES & CO., LTD. Manufactured by
[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 Incl. Report Total No. of visits ✓

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. "Kingston beylonite" 4558

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.

The approved plan is retained for dealing with duplicate boiler 147

Charged on engine report herewith

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

C. Moffatt.
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUE. 9 APR 1935
 Assigned See Machy 38



Rpt. 13.
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 Date of work
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