

# REPORT ON BOILERS.

No. 38762

Received at London Office 16 AUG 1927

Date of writing Report *15 AUG 1927* When handed in at Local Office *15 AUG 1927* Port of *Hull*

No. in Survey held at *Hull* Date, First Survey *11 March* Last Survey *9 August 1927*

*11903* in the *S. Trawler "KINGSTON ONyx"* (Number of Visits *19*) Tons { Gross *357.37* Net *145.75*

Master \_\_\_\_\_ Built at *Beverley* By whom built *Lock, Welton & Gemmell* Yard No. *488* When built *1927*

Engines made at *Hull* By whom made *Charles D. Holmes & Co Ltd* Engine No. *1312* When made *1927*

Boilers made at *Hull* By whom made *Charles D. Holmes & Co Ltd* Boiler No. *1312* When made *1927*

Nominal Horse Power *96.4* Owners *Kingston St Trawling Co Ltd* Port belonging to *Hull*

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Krupp's Maschinenbau Werke, Essen* (Letter for Record *5*)

Total Heating Surface of Boilers *1698 sq ft* Is forced draught fitted *ho* Coal or Oil fired *Coal*

No. and Description of Boilers *one single ended* Working Pressure *200 lbs*

Tested by hydraulic pressure to *350* Date of test *18.7.27* No. of Certificate *3614* Can each boiler be worked separately

Area of Firegrate in each Boiler *49.2 sq ft* No. and Description of safety valves to each boiler *2 Spring loaded*

Area of each set of valves per boiler { per Rule *4.93* as fitted *4.9* Pressure to which they are adjusted *200* 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"* Is oil fuel carried in the double bottom under boilers *ho*

Smallest distance between shell of boiler and tank top plating \_\_\_\_\_ Is the bottom of the boiler insulated

Largest internal dia. of boilers *74'-0"* Length *10'-8"* Shell plates: Material *Steel* Tensile strength *28/32 Tons*

Thickness *1 1/32"* Are the shell plates welded or flanged  Description of riveting: circ. seams { end *BR* inter.

long. seams *T.R. 5/8"* Diameter of rivet holes in { circ. seams *1 1/32"* long. seams *1 1/32"* Pitch of rivets { *3 3/4"* *8 7/8"*

Percentage of strength of circ. end seams { plate *65.83* rivets *57.94* Percentage of strength of circ. intermediate seam { plate *85.03* rivets *90.8*

Percentage of strength of longitudinal joint { plate *85.03* rivets *90.8* combined *88.83* Working pressure of shell by Rules *201 lbs.*

Thickness of butt straps { outer *1"* inner *1 1/8"* No. and Description of Furnaces in each Boiler *3 plain 3 pf.*

Material *Steel* Tensile strength *28/30 Tons* Smallest outside diameter *41"*

Length of plain part { top *76"* bottom *69"* Thickness of plates { crown *1 3/16"* bottom *1 3/16"* Description of longitudinal joint *welded*

Dimensions of stiffening rings on furnace or c.c. bottom \_\_\_\_\_ Working pressure of furnace by Rules *219 lbs.*

End plates in steam space: Material *Steel* Tensile strength *28/30 Tons* Thickness *1 3/16"* Pitch of stays *18"*

How are stays secured *DN. + Washers* Working pressure by Rules *220 lbs.*

Tube plates: Material { front *Steel* back *"* Tensile strength { *28/30 Tons* Thickness { *1 9/16"* *7/8"*

Mean pitch of stay tubes in nests *10.97* Pitch across wide water spaces *13 3/4"* Working pressure { front *211* back *230*

Girders to combustion chamber tops: Material *Steel* Tensile strength *28/32 Tons* Depth and thickness of girder at centre *10 1/2" x 1 3/4"* Length as per Rule *36 3/16"* Distance apart *9"* No. and pitch of stays in each *3 @ 8 3/4"* Working pressure by Rules *210* Combustion chamber plates: Material *Steel*

Tensile strength *28/30 Tons* Thickness: Sides *3/4"* Back *23/32"* Top *3/4" 23/32"* Bottom *3/4"*

Pitch of stays to ditto: Sides *9 x 8 3/4"* Back *9 x 8 1/2"* Top *9 x 8 3/4"* Are stays fitted with nuts or riveted over *nuts*

Working pressure by Rules *230* Front plate at bottom: Material *Steel* Tensile strength *28/30 Tons*

Thickness *1 5/16"* Lower back plate: Material *Steel* Tensile strength *28/30 Tons* Thickness *2 1/32"*

Pitch of stays at wide water space *14" x 8 3/4"* Are stays fitted with nuts or riveted over *nuts*

Working Pressure *228* Main stays: Material *Steel* Tensile strength *28/32 Tons*

Diameter { At body of stay, or Over threads *3 1/4"* No. of threads per inch *8* Area supported by each stay *324 sq in*

Working pressure by Rules *240* Screw stays: Material *Steel* Tensile strength *28/30 Tons*

Diameter { At turned off part, or Over threads *1 7/8" + 1 3/4"* No. of threads per inch *10* Area supported by each stay *78.75*

Working pressure by Rules 230 Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part,</sup> 1 7/8 or <sup>Over threads</sup>

No. of threads per inch 10 Area supported by each stay 97.75 Working pressure by Rules 218

Tubes: Material External diameter <sup>Plain</sup> 3 1/2 Thickness <sup>Stay</sup> 3 1/2 8.45 No. of threads per inch 9

Pitch of tubes 4 7/8 Working pressure by Rules 215 Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 34 x 27 x 1 1/2 No. of rivets and diameter of rivet holes 32 @ 1 1/4"

Outer row rivet pitch at ends 8.76 Depth of flange if manhole flanged / Steam Dome: Material

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint <sup>Plate</sup> <sup>Rivets</sup>

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays

How connected to shell Inner radius of crown Working pressure by Rules

Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

**Type of Superheater**

Manufacturers of <sup>Tubes</sup> <sup>Steel castings</sup>

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 23 inclusive for boilers been complied with

The foregoing is a correct description,

for CHARLES D. HOLMES & Co LTD Manufacturer.

Dates of Survey <sup>During progress of work in shops - -</sup> See attached Are the approved plans of boiler and superheater forwarded herewith Yes <sup>(If not state date of approval.)</sup>

<sup>while building</sup> <sup>During erection on board vessel - - -</sup> report on Machinery Total No. of visits 1

**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. The materials and workmanship are sound and good, the boiler has been satisfactorily fitted on board, tried under steam and its safety valves adjusted as above.

Survey Fee ... Charged on engine report When applied for, / 192

Travelling Expenses (if any) sent herewith. When received, / 192

John K. Williams.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 19 AUG 1927

Assigned See Rpt attached



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