

REPORT ON BOILERS.

No. 13917

14 MAY 1930

Received at London Office

Date of writing Report 13 May 1929 When handed in at Local Office 13 May 1929 Port of Southampton.

No. in Survey held at 6065. Date, First Survey 27. 1929 Last Survey Feb 4 1930

on the Paddle Ferry Steamer "WILL CROOKS" (Number of Visits 10) Tons { Gross Net

Master Built at 6065. By whom built J. Samuel White & Co. Ltd. Yard No. 1684 When built 1930.

Engines made at 6065. By whom made - do - Engine No. 1684 When made 1930.

Boilers made at 6065 By whom made - do - Boiler No. 1684 When made 1930.

Nominal Horse Power 170 Owners London County Council. Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel L. R. Beaudouin & Co. Ltd. (Letter for Record S.)

Total Heating Surface of Boilers 2620 (2560) Is forced draught fitted No. Coal or Oil fired Coal.

No. and Description of Boilers 2 S.E. Gunboat type 2B Working Pressure 50 lb.

Tested by hydraulic pressure to 100 lb. Date of test 5.12.29 13.12.29 No. of Certificate 293, 394 Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 48.5 sq. ft. No. and Description of safety valves to each boiler 2 Spring loaded, direct acting.

Area of each set of valves per boiler (per Rule 12.55 sq. ft.) (as fitted 19.24 sq. ft.) Pressure to which they are adjusted 52 lb. 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 and bunkers 5' 3" 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 No.

Largest internal dia. of boilers 9' 7" Length 17' 3 1/4" Shell plates: Material Steel. Tensile strength 28/32 tons.

Thickness 7/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end S.R. inter. D.R. }

long. seams D.R. lap. Diameter of rivet holes in { circ. seams 13/16 long. seams 13/16 Pitch of rivets { end 2 1/8 inches 2.737 longitudinal 2 3/4 }

Percentage of strength of circ. end seams { plate 61.76 rivets 45.8 Percentage of strength of circ. intermediate seam { plate 70.3 rivets 71.1 }

Percentage of strength of longitudinal joint { plate 70.45 rivets 70.8 combined Working pressure of shell by Rules 70.9 lb.

Thickness of butt straps { outer inner } No. and Description of Furnaces in each Boiler 2 Adamson type. 2 P.F.

Material Steel. Tensile strength 26/30 tons. Smallest outside diameter 3' 10"

Length of plain part 3' 5" 4' 3 3/8" Thickness of plates { crown 1 1/32" bottom 1 1/32" Description of longitudinal joint welded.

Dimensions of stiffening rings on furnace or cc. bottom 4' 5" x 4' 0 1/4" - 1/2" Working pressure of furnace by Rules 83.8 lb.

End plates in steam space: Material Steel. Tensile strength 26/30 tons. Thickness 5/8" Pitch of stays 2' 0 1/2" = 1' 5" 1' 9" = 1' 3"

How are stays secured Double nuts & washers. Working pressure by Rules 62.2 lb.

Tube plates: Material { front back } Steel. Tensile strength { 26/30 tons. Thickness { in cc 1 1/16" back 5/8" (and plate) }

Mean pitch of stay tubes in nests 1' 0 1/2" = 1' 0 9/16" Pitch across wide water spaces 1' 0 3/4" Working pressure { end 111.7 lb. cc 85 "

Girders to combustion chamber tops: Material Steel. Tensile strength 26/30 tons. Depth and thickness of girder

at centre Sling stays. Length as per Rule Distance apart 1' 4" No. and pitch of stays

in each Working pressure by Rules As appeared. Combustion chamber plates: Material Steel.

Tensile strength 26/30 tons. Thickness: Sides 7/16" Back 1/16" Top 7/16" Bottom 7/16"

Pitch of stays to ditto: Sides 9 1/2" x 10" Back Top Are stays fitted with nuts or riveted over Rule

Working pressure by Rules 66.7 lb. (Sides) Front plate at bottom: Material Steel. Tensile strength 26/30 tons.

Thickness 5/8" Lower back plate: Material Steel. Tensile strength 26/30 tons. Thickness 5/8"

Pitch of stays at wide water space Stay tubes 12 3/4" x 8 3/8" Are stays fitted with nuts or riveted over

Working Pressure 111.7 lb. Main stays: Material Steel. Tensile strength 28/32 tons.

Diameter { At body of stay, 1 3/4" or Over threads No. of threads per inch 9 Area supported by each stay 1' 5" x 2' 0 1/2"

Working pressure by Rules 61.3 lb. Screw stays: Material Steel. Tensile strength 26/30 tons.

Diameter { At turned off part, 1 1/8" or Over threads No. of threads per inch 9 Area supported by each stay 9 1/2" x 10"

Working pressure by Rules *64 lb.* Are the stays drilled at the outer ends. *No.* Margin stays: Diameter *1 1/8"* (At turned off part, or Over threads)

No. of threads per inch *9* Area supported by each stay *9 1/2" x 10"* Working pressure by Rules *64 lb.*

Tubes: Material *Steel.* External diameter *3"* Thickness *10 L.S. 6* No. of threads per inch *9*

Pitch of tubes *4 3/16" x 4 5/16"* Working pressure by Rules *140 lb. (plain)* Manhole compensation: Size of opening in shell plate *19 1/2" x 15 1/2"* Section of compensating ring *4" x 5/8"* No. of rivets and diameter of rivet holes *28 @ 1 3/16"*

Outer row rivet pitch at ends *5"* 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 *✓* (Plate Rivets)

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 *In uptake.* Manufacturers of *Tubes Steel castings*

Number of elements *18* Material of tubes *S.D. Steel.* Internal diameter and thickness of tubes

Material of *Sheeters* *Manchester* *certificates + approved plans attached.* 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 *52 lb.* Hydraulic test pressure: tubes *1000 lb.* castings *200 lb.* and after assembly in place *150 lb.* Are drain cocks or valves fitted to free the superheater from water where necessary *✓ in pipes.*

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *✓*

The foregoing is a correct description.
For J. Samuel White & Company Ltd.
J. Samuel White Managing Director

Dates of Survey *1929*
During progress of work in shops - *Oct 7, 15, 25 Nov 8, 13, 19 Dec 5*
while building *1930*
During erection on board vessel - *Dec 17, Jan 30, Feb 14*
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits *10*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
Then boilers have been constructed in general accordance with the approved plans and tested in accordance with the requirements of the Rules. The workmanship and materials are good.

Survey Fee ... £ : : When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

L. D. Horne
J. H. Millan *self*
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 16 MAY 1930 P*
Assigned *See attached Doc. 76.*
Rpt 13917