

## REPORT ON BOILERS.

No. 13919.

15 MAY 1930

Received at London Office

Date of writing Report *14 May 1930* When handed in at Local Office *14 May 1930* Port of *Southampton*

No. in Survey held at *Cowes* Date, First Survey *7 Oct 1929* Last Survey *28 April 1930*

Reg. Book. *0889* on the *Paddle Ferry Steamer "JOHN BENX"* (Number of Visits *15*) Tons { Gross Net

Master Built at *Cowes* By whom built *Samuel White & Co* Yard No. *1685* When built *1930*

Engines made at *do* By whom made *do* Engine No. *do* When made *do*

Boilers made at *do* By whom made *do* Boiler No. *do* When made *do*

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

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

Manufacturers of Steel *W. M. Beardmore & Co. Ltd.* (Letter for Record *3*)

Total Heating Surface of Boilers *2620 sq ft* 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/sq in*

Tested by hydraulic pressure to *100 lb/sq in* Date of test *9.1.30* No. of Certificate *396* 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 *23 pring 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/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 *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'-3/4"* Shell plates: Material *steel* Tensile strength *28/32*

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.L.* Diameter of rivet holes in { circ. seams *13/16"* long. seams *13/16"* Pitch of rivets { end *2 1/8" x 2.737"* long *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 *70.48* rivets *70.8* combined Working pressure of shell by Rules *70.9 lb/sq in*

Thickness of butt straps { outer *✓* inner *✓* No. and Description of Furnaces in each Boiler *2 Plain with adamant rings*

Material *steel* Tensile strength *26/30* Smallest outside diameter *3'-10"*

Length of plain part { top *3'-5 1/4" x 3 1/8"* bottom *✓* Thickness of plates { crown *15/32"* bottom *✓* Description of longitudinal joint *weld*

Dimensions of stiffening rings on furnace or on bottom *4'-5 1/2" x 4'-9 1/4" x 1/2"* Working pressure of furnace by Rules *83.8 lb/sq in*

End plates in steam space: Material *steel* Tensile strength *26/30* Thickness *5/8"* Pitch of stays *2'-0 1/2" x 1'-3"*

How are stays secured *Double nuts or washers* Working pressure by Rules *62.2 lb/sq in*

Tube plates: Material { front *steel* back *steel* Tensile strength { *26/30* Thickness { m.c.c. *11/16"* back *5/8"* end plate *✓*

Mean pitch of stay tubes in nests *1'-0 5/8" x 1'-0 9/16"* Pitch across wide water spaces *1'-0 3/4"* Working pressure { front end *111.7 lb/sq in* back c.c. *85 "*

Girders to combustion chamber tops: Material *steel* Tensile strength *26/30* Depth and thickness of girder at centre *slang stays* Length as per Rule *✓* Distance apart *2 1'-4"* No. and pitch of stays in each *✓* Working pressure by Rules *appd.* Combustion chamber plates: Material *steel*

Tensile strength *26/30* Thickness: Sides *7/16"* Back *11/16"* 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 *nuts*

Working pressure by Rules *66.7 lb/sq in* Front plate at bottom: Material *steel* Tensile strength *26/30*

Thickness *5/8"* Lower back plate: Material *steel* Tensile strength *26/30* 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/sq in* Main stays: Material *steel* Tensile strength *28/32*

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

Working pressure by Rules *51.3 lb/sq in* Screw stays: Material *steel* Tensile strength *26/30*

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 7/16 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 1/8"  
No. of threads per inch 9 Area supported by each stay 9 1/2 "x 10" Working pressure by Rules 64 7/16  
Tubes: Material Steel External diameter { Plain 3" Stay 3" Thickness { 12 L.S.G. 1 1/32" No. of threads per inch 9  
Pitch of tubes 4 3/16 "x 4 5/16" Working pressure by Rules 140 7/16 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 2 13/16  
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 ✓  
Inner radius of crown ✓ Working pressure by Rules ✓  
How connected to shell ✓ 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 none fitted 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 23 inclusive for boilers been complied with yes

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

Dates of Survey { During progress of work in shops - - 15/7/29, 7/10/29, 15/10/29, 12/11/29, 19/11/29, 5/12/29, 11/12/29, 17/12/29  
while building { During erection on board vessel - - 7/1/30, 9/1/30, 13/1/30, 15/1/30, 22/1/30, 13/2/30, 17/3/30, 28/4/30 28  
Are the approved plans of boiler and superheater forwarded herewith with (If not state date of approval.) "WILL CROOKS"  
Total No. of visits 15

#### GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

*These boilers have been constructed in general accordance with the approved plans and tested in accordance with the requirements of the Rules. The workmanship & materials are good.*

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

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 20 MAY 1930

Assigned

*See F.E. Rpt.*



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Foundation