

REPORT ON BOILERS.

No. 45237

Received at London Office 12 NOV 1934

Date of writing Report 19 1934 When handed in at Local Office 11 NOV 1934 Port of HULL

No. in Reg. Book. 34 Survey held at Hull Date, First Survey 5th July 1934 Last Survey 25th Oct 1934

on the Steel Sc K. "bape Barfleu" (Number of Visits 2) Gross Tons 456.92 Net Tons 185.10

Master J.B. Built at Selby By whom built Bochane & Sons Ltd. Yard No. 1127 When built 1934, 10

Engines made at Hull By whom made Charles D. Holmes & Co. Ltd. Engine No. 1465 When made 1934

Boilers made at Hull By whom made Charles D. Holmes & Co. Ltd. Boiler No. 1465 When made 1934

Nominal Horse Power 122 Owners Hudson Steam Fishing Co. Ltd. Port belonging to Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Iron Co. Ltd. (Letter for Record "S")

Total Heating Surface of Boilers 2160 sq. ft. Is forced draught fitted ✓ 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 18/9/34 No. of Certificate 3897 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 61.75 sq. ft. No. and Description of safety valves to each boiler Two spring loaded.

Area of each set of valves per boiler per Rule 14.335 sq. in. 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 12" 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 180" Length 11' Shell plates: Material Steel Tensile strength 30/34 tons

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

long. seams J.R. D.B.S. Diameter of rivet holes in circ. seams 1 3/8" long. seams 1 13/32" Pitch of rivets 9 9/16"

Percentage of strength of circ. end seams plate 63.4 rivets 58.5 Percentage of strength of circ. intermediate seam plate 85.2 rivets 84.89

Percentage of strength of longitudinal joint plate 85.2 rivets 84.89 combined 87.7 Working pressure of shell by Rules 216 #0"

Thickness of butt straps outer 1 1/16" inner 1 3/16" No. and Description of Furnaces in each Boiler Three corrugated (Seighton)

Material Steel Tensile strength 26/30 tons Smallest outside diameter 44.0625"

Length of plain part top 21 1/32" bottom 21 1/32" Thickness of plates 21 1/32" Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 218 #0"

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 7/32" Pitch of stays 19 1/2" x 16 1/2"

How are stays secured Double nuts and washers Working pressure by Rules 217 #0"

Tube plates: Material Steel Tensile strength 26/30 tons Thickness 15/16" 29/32"

Mean pitch of stay tubes in nests 10.94" Pitch across wide water spaces 14" Working pressure front 219 #0" back 215 #0"

Girders to combustion chamber tops: Material Steel Tensile strength 29/33 tons Depth and thickness of girder at centre Centre 9 1/4" by 1 3/8" Length as per Rule 36.25" Distance apart Centre 8" Wings 9 1/8"

in each 3 @ 8 1/4" Working pressure by Rules 215 #0" Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 25/32" Back 1 1/16" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 10 1/4" x 8 1/2" Back 9 1/2" x 7 3/4" Top 9 1/8" x 8 1/4" Are stays fitted with nuts or riveted over nuts.

Working pressure by Rules 218 #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 27/32"

Pitch of stays at wide water space 14" x 7 3/4" Are stays fitted with nuts or riveted over nuts.

Working Pressure 224 #0" Main stays: Material Steel Tensile strength 28/32 tons

Diameter At body of stay, 3 1/4" Over threads. No. of threads per inch 8 Area supported by each stay 361 sq. inches

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

Diameter At turned off part, 1 3/4" Over threads. No. of threads per inch 10 Area supported by each stay 73.65 sq. inches

Working pressure by Rules **246 #0** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, Over threads } **1 7/8" x 2"**

No. of threads per inch **10** Area supported by each stay **91 sq inches** Working pressure by Rules **234 #0**

Tubes: Material **Iron** External diameter { Plain **3 1/2"** Stay } Thickness { **5/16" + 3/8"** } No. of threads per inch **9**

Pitch of tubes **4 3/4" x 4 3/4"** Working pressure by Rules **215 #0** Manhole compensation: Size of opening in shell plate **16" x 12"** Section of compensating ring **4'9 3/4" dia x 1 3/8"** No. of rivets and diameter of rivet holes { **102 @ 1 3/8"** } **16 @ 1 13/32"**

Outer row rivet pitch at ends **4'5 3/8" p.c.** Depth of flange if manhole flanged **2 1/4"** Steam Dome: Material **Steel**

Tensile strength **26/30 ton** 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 **54.0** Rivets **43.8** }

Internal diameter **33"** Working pressure by Rules **230 #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 **4'9 3/4" dia by 1 3/8"** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **1 3/8" 3'9" p.c. (36 rivets)**

Type of Superheater **Smoke tube type by Superheater Co. Ltd.** Manufacturers of Tubes { **S.D. Steel** } Please see Manchester certificates.

Number of elements **43** Material of tubes **S.D. Steel** Internal diameter and thickness of tubes **1 9/16" 14 WG**

Material of headers **Steel forgings** Tensile strength **✓** Thickness **5/8"** Can the superheater be shut off and the boiler be worked separately **Yes** Is a safety valve fitted to every part of the superheater which can be shut off from the boiler **Yes**

Area of each safety valve **1 @ 1 1/2" dia 1.77 sq in** Are the safety valves fitted with easing gear **Yes** Working pressure as per Rules **Approved for 215 #0** Pressure to which the safety valves are adjusted **217 #0** Hydraulic test pressure **217 #0**

tubes **645 #0** castings **645 #0 + 1000 #0** and after assembly in place **430 #0** Are drain cocks or valves fitted to free the superheater from water where necessary **Yes**

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 - - } Are the approved plans of boiler and superheater forwarded herewith **Yes.** (If not state date of approval.)
 { During erection on board vessel - - - } **See mch report** Total No. of visits **1**

Is this Boiler a duplicate of a previous case **no** If so, state Vessel's name and Report No. **✓**

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 above.**

Charged on engine report herewith.

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

b. Knoffatt.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 9 NOV 1934**
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