

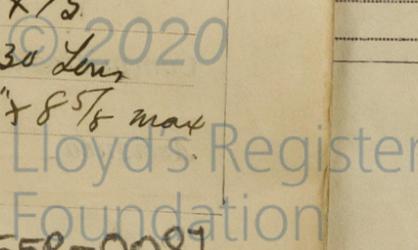
REPORT ON BOILERS.

No. 118687.

Date of writing Report 5.9.42 When handed in at Local Office 17 NOV 1942 Received at London Office 18 NOV 1942
 No. in Reg. Book. 370 Survey held at Birkenhead Port of LIVERPOOL
 on the 2 Army Boilers for MV British Promise Date, First Survey 14-1-42 Last Survey 6-11-42
 Master _____ Built at Birkenhead By whom built Cammell Laird & Co Yard No. 1068 When built 1942
 Engines made at Belfast By whom made Harland & Wolff Engine No. _____ When made 1942
 Boilers made at BIRKENHEAD By whom made CAMMEL LAIRD & CO LD Boiler No. 1068 When made 1942
 Nominal Horse Power 246 Owners _____ Port belonging to _____

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

Manufacturers of Steel Cabell's Ltd
 Total Heating Surface of Boilers 3700 sq (two blys) Is forced draught fitted yes (Letter for Record (5))
 No. and Description of Boilers 2-S-E. Coal or Oil fired Oil.
 Tested by hydraulic pressure to 275 lb Date of test 29/8/41 No. of Certificate 2544 Working Pressure 150 lb
 Area of Firegrate in each Boiler 2 No. and Description of safety valves to each boiler 2 Spring loaded 2-High Lift. Can each boiler be worked separately yes
 Area of each set of valves per boiler per Rule 7.01 as fitted 7.94 I.H. Life. Pressure to which they are adjusted 150 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 or uptakes and bunkers or woodwork well clear Is oil fuel carried in the double bottom under boilers no
 Smallest distance between shell of boiler and tank top plating on upper flat. Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 12'-6" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33 Ton
 Thickness 27/32" Are the shell plates welded or flanged no Description of riveting: circ. seams end D.R
 long. seams T.R.-D.B.S Diameter of rivet holes in circ. seams 15/16 Pitch of rivets 2.63"
 Percentage of strength of circ. end seams plate 64 rivets 49 Percentage of strength of circ. intermediate seam plate 85.5 rivets 93.0
 Percentage of strength of longitudinal joint plate 11/16 rivets 89.0 combined 89.0 Working pressure of shell by Rules 151 lb
 Thickness of butt straps outer 11/16 inner 13/16 No. and Description of Furnaces in each Boiler 2 Morrison Section
 Material Steel Tensile strength 26.30 Ton Smallest outside diameter 3'-8 1/2"
 Length of plain part top Thickness of plates crannon 1/2" bottom 1/2" Description of longitudinal joint weld
 Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules 162 lb
 End plates in steam space: Material Steel Tensile strength 26.30 Ton Thickness 31/32" Pitch of stays 17 1/2" x 15"
 How are stays secured D.N. Working pressure by Rules 162 lb
 Tube plates: Material Steel Tensile strength 26.30 Ton Thickness 27/32" Pitch of stays 195 lb
 Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 13 3/4" Working pressure back 208
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 Ton Depth and thickness of girder _____
 at centre 9' x 23/32" double Length as per Rule 34 1/2" Distance apart 9" No. and pitch of stays _____
 in each 3 @ 8" Working pressure by Rules 168 lb
 Tensile strength 26.30 Ton Thickness: Sides 11/16" Back 23/32" Top 11/16" Bottom 7/8"
 Pitch of stays to ditto: Sides 9' x 8" Back 9 1/2' x 8 5/8" Top 9' x 8" Are stays fitted with nuts or riveted over nuts at bh. back
 Working pressure by Rules 152 lb Front plate at bottom: Material Steel Tensile strength 26.30 Ton
 Thickness 27/32" Lower back plate: Material Steel Tensile strength 26.30 Ton Thickness 13/16"
 Pitch of stays at wide water space 14 3/4" Are stays fitted with nuts or riveted over nuts
 Working Pressure 178 lb Main stays: Material Steel Tensile strength 28-32 Ton
 diameter At body of stay, 2 1/2" No. of threads per inch 6 Area supported by each stay 17 1/2" x 15"
 Working pressure by Rules 168 lb Screw stays: Material Steel Tensile strength 26.30 Ton
 diameter At turned off part, 1 1/2" No. of threads per inch 9 Area supported by each stay 9 1/2' x 8 5/8" max



Working pressure by Rules **159 lb** Are the stays drilled at the outer ends **no** Margin stays: Diameter **At turned off part 3/4" Cornu 17/8**
 No. of threads per inch **9** Area supported by each stay **106.6 sq"** Working pressure by Rules **170 lb**
 Tubes: Material **Iron** External diameter **2 3/4"** Thickness **5/16" + 3/8"** No. of threads per inch **9**
 Pitch of tubes **4" x 3 7/8"** Working pressure by Rules **177 lb** Manhole compensation: Size of opening in shell plate **2 1/4" x 17/4"** Section of compensating ring **2-10" x 2'-4 1/2"** No. of rivets and diameter of rivet holes **54 @ 1 5/16"**
 Outer row rivet pitch at ends **6 1/2"** Depth of flange if manhole flanged **3 1/2"** Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 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 **W.A. Innes & Co.**
 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 casing gear Working pressure as per Rules
 Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and 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

The foregoing is a correct description of the boiler and superheater.
W.A. Innes & Co. Manufacturer.
 DIRECTOR & ENGINEERING MANAGER.

Dates of Survey while building
 During progress of work in shops - **Jan 14, Mar 31, Apr 29, May 15, June 6, July 8, 24, Aug 21, 29, Sept 15, 29, Oct 6, 8, 9, 20, 23, Nov 3, 4, 7, 20, 25**
 During erection on board vessel - **May 6, 19, 27, 28, 30, June 3, 5, 15, 26, 27, 29, July 3, 7, 8, 10, 13, 14, 15, 21, 22, 24, 27, 28**
 Total No. of visits **85**
 Are the approved plans of boiler and superheater forwarded herewith **yes**
 (If not state date of approval.)

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been properly fitted on board the British Promise, tried under working conditions, and their safety valves adjusted to 150 lbs sq. all being found in order. They have been built under special Survey, to approved plans in accordance with the Society Rules. Materials and workmanship are good.**

Survey Fee **N.B.** **24/12/0** When applied for, **17 NOV 1912**
 Travelling Expenses (if any) £ **24/12/0** When received, **19**

H. Sutherland
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **LIVERPOOL 17 NOV 1912**
 Assigned **See Minute on his P.B. Report.**

