

REPORT ON BOILERS.

No. 51601

Received at London Office 12 MAY 1942

Date of writing Report 7/4/42 19 When handed in at Local Office 10 MAY 1942 Port of HULL

No. in Survey held at HULL Date, First Survey 17. 9. 41. Last Survey 11. 4. 1942.
Reg. Book. on the H.M.S. BONITO. (Number of Visits 45.) Tons { Gross 387 Net 127Built at SELBY. By whom built Cochrane & Sons Ltd Yard No. 1239. When built 1942.2
Engines made at HULL. By whom made Chas. D. Holmes Ltd Engine No. 1608. When made do
Boilers made at HULL. By whom made Chas. D. Holmes Ltd Boiler No. 1608. When made do.
Nominal Horse Power 125. Owners THE ADMIRALTY. Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Appleby Frodingham Steel Co. Ltd. & Cochrane. (Letter for Record 5)
 Total Heating Surface of Boilers 1873. sq. ft. Is forced draught fitted Yes. Coal or Oil fired Coal
 No. and Description of Boilers One S.B. Working Pressure 210 lb./sq. in.
 Tested by hydraulic pressure to 365. Date of test 26/2/42. No. of Certificate 4134. Can each boiler be worked separately —
 Area of Firegrate in each Boiler 50 sq. ft. No. and Description of safety valves to each boiler 2 Spring loaded
 Area of each set of valves per boiler (per Rule 12.57. 10.4) Pressure to which they are adjusted 210 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 None
 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 No.
 Largest internal dia. of boilers 14'-3 1/2". Length 10'-6". Shell plates: Material Steel. Tensile strength 31-35 tons/in^2
 Thickness 1 1/4". Are the shell plates welded or flanged No. Description of riveting: circ. seams (end 3 3/4" inter. 9 1/8")
 long. seams TR., D.B.S. Diameter of rivet holes in (circ. seams 1 5/16" long. seams 1 1/2" Pitch of rivets 9 1/8"
 Percentage of strength of circ. end seams (plate 64.9% rivets 42.8% Percentage of strength of circ. intermediate seam (plate 85.1% rivets 85.8% combined 87.66)
 Percentage of strength of longitudinal joint (plate 85.1% rivets 85.8% combined 87.66)
 Thickness of butt straps (outer 3 1/32" inner 1 3/32" No. and Description of Furnaces in each Boiler 3 cf. Deighton Section
 Material Steel. Tensile strength 26-30 tons/in^2 Smallest outside diameter 3'-6 3/4"
 Length of plain part (top — bottom — Thickness of plates (crown 3 5/8" bottom — Description of longitudinal joint Weld
 Dimensions of stiffening rings on furnace or c.c. bottom None
 End plates in steam space: Material Steel. Tensile strength 26-30 tons/in^2 Thickness 1 3/32" Pitch of stays 17" x 17 1/2"
 How are stays secured Nuts & washers inside and out.
 Tube plates: Material (front Steel back — Tensile strength 26-30 tons/in^2 Thickness 1 5/16" 7/8"
 Mean pitch of stay tubes in nests 9 1/4" x 9". Pitch across wide water spaces 14" x 9" 9 1/2" with 3/4" doubler
 Girders to combustion chamber tops: Material Steel. Tensile strength 29-33 tons/in^2 Depth and thickness of girder
 at centre 9" x 7/8" Double Length as per Rule 2'-10 3/32" Distance apart 8". No. and pitch of stays
 in each 3 @ 8 1/4". Combustion chamber plates: Material Steel
 Tensile strength 26-30 tons/in^2 Thickness: Sides 2 3/32" Back 2 3/32" Top 2 1/32" Bottom 2 5/32"
 Pitch of stays to ditto: Sides 9 3/4" x 8 1/2" Back 9 1/4" x 9". Top 8 1/4" x 8". Are stays fitted with nuts or riveted over Nuts.
 Front plate at bottom: Material Steel. Tensile strength 26/30 tons/in^2
 Thickness 1 5/16". Lower back plate: Material Steel. Tensile strength 26-30 tons/in^2 Thickness 7/8"
 Pitch of stays at wide water space 14" x 9". Are stays fitted with nuts or riveted over Nuts.
 Main stays: Material Steel. Tensile strength 28-32 tons/in^2
 Diameter (At body of stay, or Over threads 3" No. of threads per inch 8
 Screw stays: Material Steel. Tensile strength 26-30 tons/in^2
 Diameter (At turned off part, or Over threads 1 3/4". No. of threads per inch 10

Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part. 1 3/4", 1 7/8", 2" }
No. of threads per inch 10.
Tubes: Material L/W. Iron External diameter { Plain 3 1/4" } Thickness { 8 W.G. } No. of threads per inch 9.
Pitch of tubes 4 1/2" x 4 5/8" Section of compensating ring 35 5/8" x 1 1/4" Manhole compensation: Size of opening in shell plate 12" (x 16") No. of rivets and diameter of rivet holes 122 @ 1 1/32"
Outer row rivet pitch at ends 10.45" Depth of flange if manhole flanged 3 3/8" Steam Dome: Material Steel
Tensile strength 26-30 ton/ft 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 50% }
Internal diameter 2'-9" Thickness of crown 7/8" Rivets 43.8%
Stays 2 @ 2 1/4" Inner radius of crown Flat.
How connected to shell Triple Rinned Size of doubling plate under dome 4'-9 1/2" dia x 1 1/2" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/32" dia. 10" pitch.

Type of Superheater None

Manufacturers of

Tubes
Steel forgings
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
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 Yes.

The foregoing is a correct description,
FOR CHARLES D. HOLMES & CO., LTD.
W.R. Evans Manufacturer.

Dates of Survey { During progress of work in shops - - } see machinery report. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - } Total No. of visits ✓

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 constructed under special survey in accordance with the approved Admiralty plans and the Rules.
The workmanship and material are good and, when subjected to a hydraulic test of 36.5 lb/sq in it was found satisfactory in every respect.

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

J. Philson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

WED. 27 MAY 1942

Assigned

See Incl. J.E. 51601



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