

REPORT ON BOILERS.

No. 18283

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Date of writing Report 2/5/1942 When handed in at Local Office 2/5/1942 Port of W. Hartlepool

No. in Survey held at Hartlepool Date, First Survey 16th Oct., 1941, Last Survey 30th April, 1942on the S/S. "EMPIRE BEAUMONT" (Number of Visits 67) Tons { Gross
Net

Built at Haverton Hill By whom built Furness Shipbuilding Co. Ltd. Yard No. 345 When built 1942
Engines made at Hartlepool By whom made Richardson Westgarth Co. Engine No. 2719 When made 1942
Boilers made at Hartlepool By whom made Richardson Westgarth Co. Boiler No. 2719 When made 1942
Nominal Horse Power 514 Owners (Man) Rumiman Shipping Co. Ltd. Port belonging to Newcastle on Tyne

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Co. of Scotland 1248 on four tube plate (Letter for Record S ✓)
Total Heating Surface of Boilers 7353 Sq. ft. Is forced draught fitted Yes ✓ Coal or Oil fired Coal ✓
No. and Description of Boilers 3 S.E. Multitubular Working Pressure 220 LB/11" ✓
Tested by hydraulic pressure to 380 LB/11" Date of test 26/3/42 No. of Certificate 3962 Can each boiler be worked separately Yes ✓
Area of Firegrate in each Boiler 55 Sq. ft. No. and Description of safety valves to each boiler 2 - 2 1/4" dia. High lift (Clockham) ✓
Area of each set of valves per boiler { per 100 6.55 sq. ft. Pressure to which they are adjusted 225 lb. Are they fitted with easing gear Yes ✓
as fitted 7.95 sq. ft.
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 2'-6" ✓ Is oil fuel carried in the double bottom under boilers ✓
Smallest distance between shell of boiler and tank top plating 24" ✓ Is the bottom of the boiler insulated ✓
Largest internal dia. of boilers 15'-0 1/2" ✓ Length 11'-6 1/2" ✓ Shell plates: Material steel ✓ Tensile strength 29/33 ✓
Thickness 1 1/2" ✓ Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end DRL ✓
long. seams TRDBS ✓ Diameter of rivet holes in { circ. seams 1 1/2" ✓
long. seams 1 1/2" ✓ Pitch of rivets { 4 1/2" ✓
Percentage of strength of circ. end seams { plate 63.6
rivets 46.3 Percentage of strength of circ. intermediate seam { plate
rivets 85.5
Percentage of strength of longitudinal joint { rivets 86.2
combined 88.3
Thickness of butt straps { outer 1 1/8" ✓
inner 1 1/4" ✓ No. and Description of Furnaces in each Boiler 3 Deighton (four neck) ✓
Material steel ✓ Tensile strength 26/30 ✓ Smallest outside diameter 3'-9 3/4" ✓
Length of plain part { top ✓
bottom ✓ Thickness of plates { crown 1 1/2" ✓
bottom 1 1/2" ✓ Description of longitudinal joint welded ✓
Dimensions of stiffening rings on furnace or s.e. bottom
End plates in steam space: Material steel ✓ Tensile strength 26/30 ✓ Thickness 1 1/2" ✓ Pitch of stays 19 3/4" x 19 3/4" ✓
How are stays secured double nut ✓
Tube plates: Material { front } steel ✓ Tensile strength 26/30 ✓ Thickness { 15/16" ✓
back } 25/32" ✓
Mean pitch of stay tubes in nests 9.4375" ✓ Pitch across wide water spaces 14" ✓
Girders to combustion chamber tops: Material steel ✓ Tensile strength 28/32 ✓ Depth and thickness of girder
at centre 2-10 1/2" x 1/2" ✓ Length as per R 2'-9 1/2" ✓ Distance apart 9 1/4" x 6 1/2" ✓ No. and pitch of stays
in each 3 @ 8" ✓
Combustion chamber plates: Material steel ✓
Tensile strength 26/30 ✓ Thickness: Sides 1/2" ✓ Back 1/2" ✓ Top 1/2" ✓ Bottom 3/8" ✓
Pitch of stays to ditto: Sides 9 1/4" x 8" ✓ Back 8' 9 1/4" ✓ Top 8" x 9 1/4" ✓ Are stays fitted with nuts or riveted over nuts ✓
Front plate at bottom: Material steel ✓ Tensile strength 26/30 ✓
Thickness 1 5/8" ✓ Lower back plate: Material steel ✓ Tensile strength 26/30 ✓ Thickness 2 1/4" ✓
Pitch of stays at wide water space 14" ✓ Are stays fitted with nuts or riveted over nuts ✓
Main stays: Material steel ✓ Tensile strength 28/32 ✓
Diameter { At body of stay, 3 1/2" ✓
Over threads 4" ✓ No. of threads per inch 6 ✓
Screw stays: Material steel ✓ Tensile strength 26/30 ✓
Diameter { At turned off part, 1 3/4" ✓
Over threads 4" ✓ No. of threads per inch 9 ✓



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Are the stays drilled at the outer ends ☒ NO
Margin stays: Diameter { At turned off part, 2" + 1/8" ✓
Over threads
No. of threads per inch 9
Tubes: Material steel External diameter { Plain 3" ✓
Stay 3" ✓ Thickness { 8 W.G. ✓
3/8", 5/8" ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 1/4" x 4 1/4" ✓ Manhole compensation: Size of opening in
shell plate Section of compensating ring No. of rivets and diameter of rivet holes
Outer row rivet pitch at ends Depth of flange if manhole flanged 4 1/4" ✓ 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 Thickness of crown No. and diameter of
stays Inner radius of crown
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 Smokebox N.E.M.C.O. Manufacturers of { Tubes Meson Talbot Steel Co
Steel forgings Meson Appley, Frodingham Steel Co
Steel castings
Number of elements 59 each tube Material of tubes S.D. steel Internal diameter and thickness of tubes 15" / 2 1/2" / m
Material of headers Forged steel Tensile strength 26,000 Thickness 1 1/2" 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 3.1416 sq" Are the safety valves fitted with easing gear Yes
Pressure to which the safety valves are adjusted 225 lb. Washers P. 9/32 C. 9/32 S 3/16 Hydraulic test pressure
tubes 1500 lb. forgings and castings 660 lb. and after assembly in place 660 lb. Are drain cocks of
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

For RICHARDSON, WESTGARTH & Co. LIMITED.
The foregoing is a correct description,
W. J. Morgan Manufacture
DIRECTOR

Are the approved plans of boiler and superheater forwarded herewith 9/7/41
(If not state date of approval.)
Dates of Survey { During progress of work in shops - -
while building { During erection on board vessel - -
1942. March 6. 25. 30. April 15. 14. 20. Total No. of visits 16.
25. May 8. 14. 15. 18. 19. 20. 22. 26. 27.

Is this Boiler a duplicate of a previous case ☒ NO If so, state Vessel's name and Report No. Standard "B" Type Ship

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

The boilers have been constructed under Special Survey &
in accordance with the approved plans for a working pressure of 220 lb./sq. in.
The materials & workmanship have been found good.
Upon completion the boilers were tested with a hydraulic pressure
of 380 lb./sq. in. & found sound & tight.
These boilers have been forwarded to Haverton Hill.

The Boilers securely fitted on board, & examined under working conditions & found
Satisfactory.
The Safety Valves adjusted under steam to 220 lb./sq. in. on completion.

Survey Fee ... £ See pp 4 When applied for, 19
Travelling Expenses (if any) £ When received, 19

Committee's Minute

Assigned

See Ind. J.E. 17270

Clive Bell.

Engineer Surveyor to Lloyd's Register of Shipping.

L. Norman Stuart + S. Wood.



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