

pt. 5c.

REPORT ON WATER TUBE BOILERS.

MOB. 17867.
No. 18619

107 JAN 1945

Received at London Office

Date of writing Report 16/1/45 When handed in at Local Office 16/1/45 Port of W. Hartlepool
No. in Survey held at Hartlepool Date, First Survey 22/12/43 Last Survey 10/1/45
Reg. Bk. on the 5 1/2 " WAVE REGENT " (Number of Visits 96) Gross 8184 Tons Net 4554
Built at Haperton Hill By whom built Furness B.C. 363 When built
Engines made at Hartlepool By whom made Richardson Westgath & Co. 2452 When made 1945
Boilers made at " By whom made " When made 1945
Nominal Horse Power Owners Admiralty Port belonging to London

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel

Date of Approval of plan 18/6/42 Number and Description or Type

of Boilers 2 Foster Wheeler "D" Type Working Pressure 480 lbs Tested by Hydraulic Pressure to 740 lbs Date of Test 2/11/44

No. of Certificate 4038 Can each boiler be worked separately Yes Total Heating Surface of Boilers 6840 sq. ft.

Is forced draught fitted Yes Area of fire grate (coal) in each Boiler See below

No. and type of burners (oil) in each boiler 3 Wallend & Horden No. and description of safety valves on

each boiler 1-2" single spring J.H.L. Area of each set of valve 11.1 sq. in. Pressure to which they are adjusted 505 lbs

Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 3'-6" Height of boiler 15'-9" Width and Length 14'-5 1/2" x 11'-7 1/2"

Steam Drums:—Number in each boiler one Inside diameter 3'-6" Thickness of plates 1 1/8"

Range of Tensile Strength 28/32 Are drum shell plates welded or flanged welded Description of riveting:—

Cir. seams Yes long. seams Yes Diameter of rivet holes in long. seams Yes Pitch of rivets Yes

Lap of plate or width of butt straps Yes Thickness of straps Yes Percentage strength of long. joint:—Plate Yes Rivet Yes

Diameter of tube holes in drum 2" x 1 1/4" Pitch of tube holes 2 1/4" x 2 3/4" x 1 1/2" Percentage strength of shell in way of tubes 1 1/2" = 44.4

Working pressure by rules as app. Steam Drum Heads or Ends:—Range of tensile strength 26/30 Thickness of plates 1 1/8" x 1 3/8"

Radius or how stayed 3'-6" Size of manhole or handhole 16" x 12" Working pressure by rules as app. Water Drums:—Number

in each boiler one Inside Diameter 2'-9" Thickness of plates 1 1/32" Range of tensile strength 28/32 Are drum shell plates

welded or flanged welded Description of riveting:—Cir. seams Yes long. seams Yes Diameter of rivet holes in

long. seams Yes Pitch of rivets Yes Lap of plates or width of butt straps Yes Thickness of straps Yes

Percentage strength of long. joint:—Plate Yes Rivet Yes Diameter of tube holes in drum 2" x 1 1/4" Pitch of tube holes do. above

Percentage strength of drum shell in way of tubes do. above Working pressure by rules as app. Water Drum Heads or Ends:—Range of

Tensile strength 26/30 Thickness of plates 1 1/8" Radius or how stayed 2'-9"

Size of manhole or handhole 16" x 12" Working pressure by rules as app. Headers or Sections:—Number 3

Material steel Thickness 7/8" Tested by Hydraulic Pressure to 740 lbs Tubes:—Diameter 2" 1 1/2"

Thickness 11 g. Number 384 1040 Steam Dome or Collector:—Description of Joint to Shell

Inside diameter Yes Thickness of shell plates Yes Range of tensile strength Yes

Description of longitudinal joint Yes Diameter of rivet holes Yes Pitch of rivets Yes Lap of plate or width of

butt straps Yes Thickness of straps Yes Percentage strength of long. joint Yes Plate Yes Rivet Yes

Working Pressure of shell by rules Yes Crown or End Plates:—Range of tensile strength Yes

Thickness Yes Radius or how stayed Yes Working pressure by rules Yes

SUPERHEATER. Drums or Headers:—Number in each boiler 2 Inside Diameter 6 1/2" x 6 1/2"

Thickness 1 1/8" Material Steel Range of tensile strength 28/32 Are drum shell plates welded

or flanged weldless Description of riveting:—Cir. seams Yes long. seams Yes Diameter of rivet holes in

long. seams Yes Pitch of rivets Yes Lap of plates or width of butt straps Yes Thickness of straps Yes

Percentage strength of long. joint:—Plate Yes Rivet Yes Diameter of tube holes in drum 1 1/2" Pitch of tube holes 2 1/2" x 1 1/8"

Percentage strength of drum shell in way of tubes Yes Working pressure by rules as app. Drum Heads or Ends:—flat

Thickness 1 1/8" Range of tensile strength 28/32 Radius or how stayed 2" Size of manhole or handhole 2"

Working pressure by rules as app. Number, diameter, and thickness of tubes 300 - 1 1/2" x 11 g. Tested by Hydraulic Pressure to 740 lbs

Date of Test 11/10/44 Is a safety valve fitted to each section of the superheater which can be shut off from the boiler Yes

No. and description of Safety Valves 1-2 1/2" double spring J.H.L. Area of each set of valves 4.96 sq. in.

Pressure to which they are adjusted 489 lbs Is easing gear fitted Yes

Spare Gear. Has the spare gear required by the rules been supplied Yes For RICHARDSONS, WESTGATH & Co. LIMITED.

Total H.S. 2 Boilers 6840 2 1/2" 1660 2 3/4" 2405 10905 sq. ft.

The foregoing is a correct description, W. J. Morgan DIRECTOR Manufacturer.

Dates of Survey During progress of work in shops - - - 1943 Dec. 22, 1944 Jan. 12, 14, 24, Feb. 2, 3, 5, 10, 11, 12, 21, 24, Mar. 1, 2, April 4, 15, 19, 26, 27, 28, 29

while building During erection on board vessel - - - 1945 Jan. 13, 14, 20, 21, 23, 24, 27, 28, Dec. 1, 2, 7, 11, 13, 15, 18, 28, 1945 Jan. 3, 10

Is the approved plan of boiler forwarded herewith No

Total No. of visits 96

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. 2451

GENERAL REMARKS (State quality of workmanship, opinions as to class, etc.) These boilers with their superheaters and economisers have been constructed under special survey and in accordance with the approved plans and specification for a working pressure of 480 lbs.

The workmanship and materials have been found good. P.T.O.

Survey Fee ... £ See below When applied for, 10

Travelling Expenses (if any) £ to follow When received, 10

Committee's Minute FRI. 13 JUL 1945

Assigned See Mch. fe machy

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✓ Upon completion the boiler, superheaters and economisers were hydraulically tested to 770 lbs^{sq} and found tight and sound.

The boilers have been despatched to Staverden Hill for fitting on board Sunnys S.B. Co vessel 363.

EW Drums fitted to these boilers.

Steam Drums.	EW 1433	N ^o 468.	Birmingham	Cent No 3104.
	50989.	1697/3.	Glasgow	Cent No 51514.
Water Drums.	50989	1697/1	"	"
	EW 1456	N ^o 447	Birmingham	Cent No 2994.

These boilers have now been securely fitted on board & examined under working conditions & found satisfactory.

On completion the SV's of both boilers were adjusted under steam, the SV's of the drums to 505 lbs/sq. & those of the superheaters to 480 lbs/sq.

Leithman Stuart