

REPORT ON WATER TUBE BOILERS.

No. 19321.

Received at London Office 1 FEB 1952

Date of writing Report 29-1-1952 When handed in at Local Office 29-1-1952 Port of West Hartlepool

No. in Survey held at West Hartlepool Date, First Survey 15th January, 1951, Last Survey 21st January, 1952.
Reg. Bk. on the CALTEX CALCUTTA (Number of Visits 24) Tons { Gross 857 Net 4808
Built at Sunderland By whom built Wm Doxford & Sons Ltd When built 1952
Engines made at Sunderland By whom made Wm Doxford & Sons Ltd When made 1952
Boilers made at West Hartlepool By whom made Richardson Westgarth & Co Ltd, D622 When made 1952
Nominal Horse Power M.N. 288 each Owners Wm Doxford & Sons Ltd Port belonging to London

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

Date of Approval of plan DESIGN PRESS 250 lb/sq in Number and Description or Type of Boilers 2- Foster Wheeler Water Tube Boilers Working Pressure 220 lb/sq in Tested by Hydraulic Pressure to 425 lb/sq in Date of Test 21-1-52
No. of Certificate 4157 Can each boiler be worked separately Yes Total Heating Surface of Boilers 6920 sq ft, 3460 sq ft each Boiler including 160 sq ft superheat
Is forced draught fitted Yes Area of fire grate (coal) in each Boiler 2- Todds No. and description of safety valves on

each boiler One- 2" Single Spring Bockburn High Lift Area of each set of valves per boiler { per rule as fitted 3.14 sq in Pressure to which they are adjusted Yes 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 Height of boiler 16'-8 3/4"

Width and Length 10'-4 1/16" x 11'-6 3/4" Steam Drums:—Number in each boiler One Inside diameter 3'-5 3/4"

Thickness of plates 1 5/16" Range of Tensile Strength 28-32 Tons Are drum shell plates welded or flanged Welded If fusion welded, state name of welding firm Marshall Anderson & Co Mothelwell Have all the requirements of the rules for Class I vessels been complied with Yes

Description of riveting:—Cir. seams long. seams

Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of long. joint:—Plate Rivet 3" = 33 1/3% Diameter of tube holes in drum 2" x 1 1/8" Pitch of tube holes 3" x 1 3/4"

Percentage strength of shell in way of tubes 1 3/4" = 33 1/3% Steam Drum Heads or Ends:—Range of tensile strength 26-30 Tons

Thickness of plates 1 5/16" Radius or how stayed 3'-5 3/4" inside Size of manhole or handhole 16 x 12" Water Drums:—Number

each boiler One Inside Diameter 2'-5 1/2" Thickness of plates 1 1/8" Range of tensile strength 28-32 Tons Are drum shell plates welded or flanged Welded If fusion welded, state name of welding firm Marshall Anderson & Co Mothelwell Have all the requirements of the rules for Class I vessels been complied with Yes

Description of riveting:—Cir. seams long. seam

Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps

Percentage strength of long. joint:—Plate Rivet 3" = 33 1/3% Diameter of tube holes in drum 2" x 1 1/8" Pitch of tube holes 3" x 1 3/4"

Percentage strength of drum shell in way of tubes 1 1/8" = 35.7% Water Drum Heads or Ends:—Range of Tensile strength 26-30 Tons

Thickness of plates 1 1/8" Radius or how stayed 2'-5 1/2" inside Size of manhole or handhole 16 x 12"

Readers or Sections:—Number 2 Material 8 W.G. 11 W.G. Thickness 1 5/16" Tested by Hydraulic Pressure to 425 lb/sq in

Number of Tubes:—Diameter 1 1/8" o.d. Thickness 8 W.G. 11 W.G. Number 803 for Boiler Steam Dome or Collector:—Description of

183 int to Shell Inside diameter Thickness of shell plates Range of tensile

Length Description of longitudinal joint If fusion welded, state name of welding

19" Have all the requirements of the rules for Class I vessels been complied with Diameter of rivet holes

Thickness of straps Percentage strength of long. Joint Plate Rivet

Down or End Plates:—Range of tensile strength Thickness Radius or how stayed

SUPERHEATER. Drums or Headers:—Number in each boiler One Inside Diameter 5 1/4" x 4 1/2" inside

Thickness 3/4" Material Mild Steel Range of tensile strength 28-32 Tons Are drum shell plates welded or flanged Welded If fusion welded, state name of welding firm Foster Wheeler Ltd Have all the requirements of the rules for Class I vessels been complied with Yes

Description of riveting:—Cir. seams long. seams

Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of long. joint:—Plate Rivet 3" = 33 1/3%

Diameter of tube holes in drum 2" x 1 1/8" Pitch of tube holes 3 1/4" Percentage strength of drum shell in way of tubes 38.4%

Drum Heads or Ends:—Two Thickness 1 3/8" Range of tensile strength 28-32 Tons

Radius or how stayed Size of manhole or handhole 2'-0 3/8" x 1'-0 3/8" Number, diameter, and thickness of tubes 12-2" o.d. x 7/16" thick

Tested by Hydraulic Pressure to Date of Test Is a safety valve fitted to each section of the superheater which

Can be shut off from the boiler No. and description of Safety Valves One 2" Double Spring Bockburn High Lift Area of each set

valves 6.3 sq in Pressure to which they are adjusted Is easing gear fitted Yes

Easing Gear. Has the spare gear required by the rules been supplied

RICHARDSONS, WESTGARTH & CO. LIMITED
The foregoing is a correct description,
J. A. Wilson
Manufacturer.

During progress of 1951, Jan. 15, Feb. 12-16, April 2, June 1, Oct. 11, 1951, and 1952, Jan. 2, 22, 29, Nov. 6, 16, 26, Dec. 5, 6, 7, 10, 12, 20, 28, 1952, Jan. 2, 3, 9, 14, 18, 21, 24
The approved plan of boiler forwarded herewith Yes
Total No. of visits 24

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers have been constructed under special survey in accordance with approved plans, Secretary's Letter and the rules of the Society for a working pressure of 220 lb/sq in. The materials and workmanship are good. On completion they were tested by hydraulic pressure to 425 lb/sq in and found sound and tight.

Survey Fee ... £ 82 : 14 : 0 When applied for, 29-1-1952.

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute TUES. 9 DEC 1952

Signed See F. E. Mch. rpt. Slot 35918

H. A. Wilson.
Engineer Surveyor to Lloyd's Register of Shipping.
These boilers have been securely fitted on board the vessel & safety valves adjusted under steam at working pressure.
W. Armstrong

004603-004611-0231