

REPORT ON WATER TUBE BOILERS.

No. 18396

Date of writing Report 23-3-1943 When handed in at Local Office 23-3-1943 Port of *W. Hartlepool*
 No. in Survey held at *Hartlepool* Date, First Survey 18th March, 1942 Last Survey 17th March, 1943
 Reg. Bk. on the *EMPIRE VICEROY* (Number of Visits 103) Tons { Gross
 Built at *Barrow* By whom built *Vicker, Armstrong & Co. Ltd. No. 858* When built
 Engines made at *Hartlepool* By whom made *Richardson Westgarth & Co. (2734)* When made 1943
 Boilers made at " " " " When made 1943
 Nominal Horse Power 1415 Owners Port belonging to

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Colville Ltd.*
 Date of Approval of plan 16/4/42
 No. of Boilers 2 Foster Wheeler D Type with Economisers
 No. of Certificate 492 Tested by Hydraulic Pressure to 440 lb. Date of Test 7.4.43
 Is forced draught fitted Yes Total Heating Surface of Boilers 15814 Sq. ft. (Including Economisers)
 No. and type of burners (oil) in each boiler 4 Todd Area of fire grate (coal) in each Boiler
 Each boiler one 2" Single HIGH LIFT. Area of each set of valves per boiler { per rule 10.4 7.0 for 144 with 257 F. 257 F. 257 F. 257 F.
 Are they fitted with easing gear Yes Pressure to which they
 In case of donkey boilers state whether steam from main boilers can enter
 Width and Length 20'-1 1/2" x 14'-2 7/8" Steam Drums:—Number in each boiler one Inside diameter 3'-6"
 Thickness of plates 1 5/8" Range of Tensile Strength 28/32 Are drum shell plates welded
 If fusion welded, state name of welding firm John Thompson Wolverhampton Have all the requirements of the rules
 Description of riveting:—Cir. seams long. seams
 Pitch of rivets Thickness of straps Percentage strength of
 Diameter of tube holes in drum 2" x 1 1/4" Pitch of tube holes 2 1/2" x 2 3/4" x 1 5/8"
 Steam Drum Heads or Ends:—Range of tensile strength 26/30
 Size of manhole or handhole 16" x 12"
 Water Drums:—Number
 Are drum shell plates
 Have all the requirements of the rules
 Description of riveting:—Cir. seams long. seam
 Pitch of rivets Thickness of straps
 Diameter of tube holes in drum 2" x 1 1/4" Pitch of tube holes 2 1/2" x 2 3/4" x 1 5/8"
 Water Drum Heads or Ends:—Range of Tensile strength 26/30
 Size of manhole or handhole 16" x 12"
 Tested by Hydraulic Pressure to 740 lb.
 Steam Dome or Collector:—Description of
 Range of tensile
 If fusion welded, state name of welding
 Diameter of rivet holes
 Plate Rivet
 Thickness of straps Percentage strength of long. Joint
 Radius or how stayed
 Inside Diameter 6 1/4" x 6 1/4"
 Are drum shell plates welded
 Have all the requirements of the rules
 Description of riveting:—Cir. seams long. seams
 Pitch of rivets Thickness of straps Percentage strength of
 Diameter of tube holes in drum 1 1/4" Pitch of tube holes 2 1/2" x 1 1/2"
 Percentage strength of
 Drum Heads or Ends: flat ends Thickness 1 1/8" Range of tensile strength 28/32
 Size of manhole or handhole 2" Number, diameter, and thickness of tubes 310-1 1/4" + 119.
 Tested by Hydraulic Pressure to 1500 lb. Date of Test 6.4.48 Feb. 1943 Is a safety valve fitted to each section of the superheater which
 No. and description of Safety Valves 2 1/2" double HIGH LIFT. Area of each set
 Pressure to which they are adjusted 440 lbs./sq. in. Is easing gear fitted Yes
 Spare Gear. Has the spare gear required by the rules been supplied Yes.

Economisers

Date of Test Port 6/2/43

Dates { During progress of work in shops - - - From 18/3/42 to 19/3/43
 while { During erection on board vessel - - -

Is the approved plan of boiler forwarded herewith No

Total No. of visits

this 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 are being constructed under Special Survey & in accordance with the approved plans & Specification for a working pressure of 460 lb./sq. in. The materials & workmanship have been found good. The boilers have been constructed, as far as practicable, (Contd.)

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

Committee's Minute
 assigned

TUES. 14 SEP 1943

see minute
 on Bw B. Rpt.

Clive Bell & Sydney J. Johnson
 Engineer Surveyors to Lloyd's Register of Shipping.

Lloyd's Register
 Foundation

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in the Works by the fitting of the drums & main banks of tubes (except floor rear, side & roof tubes) & these have been hydraulically tested to 740 LB. & found tight. The two Superheaters & port economiser have been constructed & completed & have been hydraulically tested to 740 LB./sq. in. & found tight. The construction will be completed by the fitting of the water wall tube & header & the starboard economiser on board the vessel & the whole finally tested. The boilers have been despatched to Barrow for completion of construction & final erection on board Messrs. Vickers Armstrong's Vessel No 858. Rpt 4 a will be forwarded when the engines have been completed.

Bolers completed a Barrow. & fitted in vessel. On completion the bolers were tested by hydraulic pressure to 440. lbs / sq. & found tight & stable factory. (Certificate No 492 dated 7.4.43)