

REPORT ON WATER TUBE BOILERS.

No. 19518

24 FEB 1954

17 AUG 1954

Received at London Office

Writing Report 23-2-1954 When handed in at Local Office 23-2-1954. Port of *West Hartlepool*
 Survey held at *West Hartlepool* Date, First Survey *9th November, 1951*, Last Survey *17th February, 1954*
 on the *S.S. "World Harmony"* (Number of Visits *44*) Tons { Gross
 at *Newcastle-on-Tyne* By whom built *Vickers-Armstrongs* When built *1954*
 in *Newcastle-on-Tyne* By whom made *Parsons Marine Steam Turbine Co* When made *1954*
 made at *Hartlepool* By whom made *Richardsons, Westgarth (HPE) Ltd* When made *1954*
 Principal Horse Power *2,750* Owners *WORLD TANKERS CORPORATION* Port belonging to *PIREUS*

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel *TALBOT STEEL TUBES CO., TUBES 4 TO 10*
CHESTERFIELD TUBES CO., STEWARTS & LLOYDS
 of Approval of plan *3-3-51, 13-7-51, 5-11-51, 13-11-51, 15-7-52, 15-9-52, 22-7-52, 29-12-52, 14-7-53* Number and Description or Type
 Boilers *2-Foster Wheeler D TYPE* Working Pressure *850 lb/sq* Tested by Hydraulic Pressure to *1,500 lb/sq* Date of Tests *26-5-53*
 of Certificate *4194* Can each boiler be worked separately *Yes* Total Heating Surface of Boilers *1130* SUPERHEATER *130* PER BOILER
 Forced draught fitted *Yes* Area of fire grate (coal) in each Boiler *4-Todd D-16" Vee Bee Type* No. and description of safety valves on *2-91 0"*
 and type of burners (oil) in each boiler *1-1 3/4 Cockburn Double Full bore - Superheater* Pressure to which they *5-25 0"*
 in boiler *1-1 1/2 Cockburn Single Full bore - Steam Drum* Area of each set of valves per boiler { per rule *2-91 0"* as fitted *5-25 0"*
 adjusted *DRUM - 875 LBS.* (UNDER FULL STEAMING CONDITIONS) In case of donkey boilers state whether steam from main boilers can enter
 donkey boiler *Yes* they fitted with easing gear *Yes* Height of boiler *23'-9"*
 width and Length *19'-4" x 14'-0"* Steam Drums:—Number in each boiler *One* Inside diameter *4'-0"*
 thickness of plates *3 1/8"* Range of Tensile Strength *32-36 Tons/sq* Are drum shell plates welded
Forged If fusion welded, state name of welding firm *Yes* Have all the requirements of the rules
 Class I vessels been complied with *Yes* Description of riveting:—Cir. seams *Yes* long. seams *Yes*
 diameter of rivet holes in long. seams *Yes* Pitch of rivets *Yes* Thickness of straps *Yes* Percentage strength of *3 1/8" for 2"*
 long. joint:—Plate *Yes* Rivet *47.5% for 2"* Diameter of tube holes in drum *2 1/4" O.D.* Pitch of tube holes *2" for 1 1/4"*
 percentage strength of shell in way of tubes *37.5% for 1 1/4"* Steam Drum Heads or Ends:—Range of tensile strength *32-36 Tons/sq*
 thickness of plates *5 1/4"* Radius or how stayed *Yes* Size of manhole or handhole *12" x 16" Elliptical* Water Drums:—Number
 each boiler *One* Inside Diameter *2'-6"* Thickness of plates *2 3/4"* Range of tensile strength *28-32 Tons/sq* Are drum shell plates
 welded or *Forged* If fusion welded, state name of welding firm *Yes* Have all the requirements of the rules
 Class I vessels been complied with *Yes* Description of riveting:—Cir. seams *Yes* long. seam *Yes*
 diameter of rivet holes in long. seams *Yes* Pitch of rivets *Yes* Thickness of straps *Yes* Percentage strength of *3 1/8" for 2"*
 percentage strength of long. joint:—Plate *47.5% for 2"* Diameter of tube holes in drum *2 1/4" O.D.* Pitch of tube holes *2" for 1 1/4"*
 percentage strength of drum shell in way of tubes *37.5% for 1 1/4"* Water Drum Heads or Ends:—Range of Tensile strength *28-32 Tons/sq*
 thickness of plates *3 7/8"* Radius or how stayed *Yes* Size of manhole or handhole *12" x 16" Elliptical*
 Leaders or Sections:—Number *3-Per Boiler* Material *28-32 Tons/sq* Thickness *1 1/2"* Tested by Hydraulic Pressure to *1500 lb/sq*
 tubes:—Diameter *2" 90 1 1/4" 100* Thickness *5.1 W.G. 10.1 W.G.* Number *110* PER BOILER Steam Dome or Collector:—Description of
 joint to Shell *Yes* Inside diameter *Yes* Thickness of shell plates *Yes* Range of tensile
 strength *Yes* Description of longitudinal joint *Yes* If fusion welded, state name of welding
 firm *Yes* Have all the requirements of the rules for Class I vessels been complied with *Yes* Diameter of rivet holes *Yes*
 Pitch of rivets *Yes* Thickness of straps *Yes* Percentage strength of long. joint *Yes* Plate *Yes* Rivet *Yes*
 Crown or End Plates:—Range of tensile strength *Yes* Thickness *Yes* Radius or how stayed *Yes*
 SUPERHEATER. Drums or Headers:—Number in each boiler *Two* Inside Diameter *9"*
 Thickness *1 1/2"* Material *1/2% Moly. Steel* Range of tensile strength *28-32 Tons/sq* 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 *Yes* long. seams *Yes*
 diameter of rivet holes in long. seams *Yes* Pitch of rivets *Yes* Thickness of straps *Yes* Percentage strength of *3 1/8" for 2"*
 long. joint:—Plate *Yes* Rivet *47.5% for 2"* Diameter of tube holes in drum *1 1/8"* Pitch of tube holes *1 1/8"* Percentage strength of
 drum shell in way of tubes *38%* Drum Heads or Ends:—Thickness *1 3/4"* Range of tensile strength *28-32 Tons/sq*
 Radius or how stayed *FLAT* Size of manhole or handhole *2" DIA* Number, diameter, and thickness of tubes *227-1 1/8" O.D. 10.1 W.G.*
 Tested by Hydraulic Pressure to *1500 lb/sq* Date of Test *17-2-54* 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 *Yes* Area of each set
 of valves *Yes* Pressure to which they are adjusted *Yes* Is easing gear fitted *Yes*
 Spare Gear. Has the spare gear required by the rules been supplied *Yes* For *RICHARDSONS, WESTGARTH (HARTLEPOOL) LIMITED.*
 The foregoing is a correct description,
J. H. Hall Manufacturer.

Dates of Survey { During progress of 1951. Nov. 9-22. 1952. July 4-10. Oct. 1-14. 22. Is the approved plan of boiler forwarded herewith
 while work in shops -- Nov. 5-12. 25. Dec. 4-15. 23-31. 1953. Jan. 7-15.
 building { During erection on 22-29. Feb. 4-12. 19-26. March 6-13. 17. April 1- Total No. of visits 44.
 board vessel -- 7-10. 13-14. 23-29. May 1-5. 7-12. 20-26. June 16. July 17-21. Dec. 24. 1954. Jan. 29. Feb. 15-17.

Is this boiler a duplicate of a previous case *Yes* If so, state vessel's name and report No. *S.S. "World Enterprise" 19412*

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 letters and the rules of the Society for a working pressure of 850 lb/sq. The materials and workmanship are good. On completion they were tested by hydraulic pressure to 1,500 lb/sq and found sound and light*

Survey Fee ... £148 : 4 : 0 When applied for, 23-2-1954
 Travelling Expenses (if any) £ : : When received, 19

FRIDAY 22 OCT 1954

Committee's Minute
 Assigned

See Rpt. 4 e.

H. A. Wilson
 Engineer Surveyor to Lloyd's Register of Shipping.

004019-004028-0181

NEWCASTLE-ON-TYNE, No 111672.

These two boilers have been installed in S.S. *Wanda Hannon*
safety valves adjusted to lift at: [DRUM - 965 lb/sq. in.
under full power conditions, and found to operate satisfactorily.

T. J. Morris

SURVEYOR TO LLOYD'S REGISTER.
NEWCASTLE-ON-TYNE.

Rpt. 4

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