

# REPORT ON WATER TUBE BOILERS.

No. 19518

24 FEB 1954

12 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 Net

at Newcastle-on-Tyne By whom built Vickers-Armstrongs When built 1954

Lines made at Newcastle-on-Tyne By whom made Parsons Marine Steam Turbine Co When made 1954

Boilers 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 PIREAUS

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel TALBOT STEEL TUBES CO, TUBES LTD, CHESTERFIELD TUBES CO, STEWART & LLOYD

Boilers 2-Foster Wheeler D TYPE Working Pressure 850 lb/sq. in. Tested by Hydraulic Pressure to 1,500 lb/sq. in. Date of Test 16-6-53

Forced draught fitted Yes Can each boiler be worked separately Yes Total Heating Surface of Boilers 1130 SUPERHEATER 130 BOILER 25710 + 1255 + 2910 = 16840 TOTAL FOR SHIP.

Area of fire grate (coal) in each boiler 4-Todd D-16" Nee Bee Type No. and description of safety valves on per rule 2-91 0"

Boiler 1-1 1/2" Bocklum Double Full bore-Superheater Area of each set of valves per boiler as fitted 5-250" Pressure to which they adjusted DRUM - 965" Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter

donkey boiler Smallest distance between boilers or uptakes and bunkers or woodwork 20' 7" Height of boiler 23'-9" Inside diameter 4'-0"

Width and Length 19'-4" x 14'-0" Steam Drums:—Number in each boiler One Range of Tensile Strength 32-36 Tons/0" Are drum shell plates welded

Thickness of plates 3 13/16" Range of Tensile Strength 32-36 Tons/0" Have all the requirements of the rules

Class I vessels been complied with Description of riveting:—Cir. seams long. seams

Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of Rivet 47.5% for 2" 37.5% for 1 1/4" Diameter of tube holes in drum 2 9/16" O.D. Pitch of tube holes 3 13/16" for 2" 2" for 1 1/4"

Percentage strength of shell in way of tubes 47.5% for 2" 37.5% for 1 1/4" Steam Drum Heads or Ends:—Range of tensile strength 32-36 Tons/0" Water Drums:—Number

Thickness of plates 5 1/4" Radius or how stayed Size of manhole or handhole 12" x 16" Elliptical Are drum shell plates

each boiler One Inside Diameter 2'-6" Thickness of plates 2 3/4" Range of tensile strength 28-32 Tons/0" Have all the requirements of the rules

Class I vessels been complied with Description of riveting:—Cir. seams long. seam

Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of Rivet 47.5% for 2" 37.5% for 1 1/4" Diameter of tube holes in drum 2 9/16" O.D. Pitch of tube holes 3 13/16" for 2" 2" for 1 1/4"

Percentage strength of drum shell in way of tubes 47.5% for 2" 37.5% for 1 1/4" Water Drum Heads or Ends:—Range of Tensile strength 28-32 Tons/0" Size of manhole or handhole 12" x 16" Elliptical

Thickness of plates 3 7/8" Radius or how stayed Size of manhole or handhole 12" x 16" Elliptical Tested by Hydraulic Pressure to 1500 lb/sq. in.

Leaders or Sections:—Number 3-Per Boiler Material 28-32 Tons/0" Thickness 1 1/2" PER BOILER Steam Dome or Collector:—Description of

tubes:—Diameter 2" 9/16" 1 1/4" O.D. Thickness 5 1/2" W.G. 10 1/2" W.G. Number 110 PER BOILER Steam Dome or Collector:—Description of

Joint to Shell Inside diameter Thickness of shell plates Range of tensile

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

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

Pitch of rivets Thickness of straps Percentage strength of long. Joint Plate Rivet

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

SUPERHEATER. Drums or Headers:—Number in each boiler Two Inside Diameter 9" Are drum shell plates welded

Thickness 1 1/2" Material 1/2% Moly. Steel Range of tensile strength 28-32 Tons/0" Have all the requirements of the rules

or flanged Welded If fusion welded, state name of welding firm Foster Wheeler Ltd

for Class I vessels been complied with Description of riveting:—Cir. seams long. seams

Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of Rivet 47.5% for 2" 37.5% for 1 1/4" Diameter of tube holes in drum 1 1/8" Pitch of tube holes 1 13/16" Percentage strength of

long. joint:—Plate Rivet Diameter of tube holes in drum 1 1/8" Pitch of tube holes 1 13/16" 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/0"

Radius or how stayed FLAT Size of manhole or handhole 2" DIA Number, diameter, and thickness of tubes 227-1/8" O.D. x 10 1/2" W.G. 208

Tested by Hydraulic Pressure to 1500 lb/sq. in. 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 No. and description of Safety Valves Area of each set

of valves Pressure to which they are adjusted Is easing gear fitted

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. M. Hall Manufacturer. DIRECTOR

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. in. The materials and workmanship are good. On completion they were tested by hydraulic pressure to 1,500 lb/sq. in. and found sound and light

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

Committee's Minute Assigned Sae Rpt. 4 l.

FRIDAY 22 OCT 1954

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

Lloyd's Register of Shipping

004019-004028-0181

NEWCASTLE-ON-TYNE, No 111672.

These two boilers have been installed in S.S. "World Harbours"  
safety valves adjusted to lift at: [DRUM - 965 lb/sq  
SPHT. - 875 . . .], examined  
under full power conditions, and found to operate satisfactorily.

T. Morris

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

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