

## REPORT ON WATER TUBE BOILERS.

No. 116157

Received at London Office

Date of writing Report 9 Feb. 1948 When handed in at Local Office 12 Feb 1948 Port of London  
 No. in Survey held at London Date, First Survey and Last Survey 16 Jan. 1948  
 Reg. Book. 37169 on the S.S. BENARTY (Number of Visits 1) Gross 7265  
 Built at Baltimore By whom built Bethlehem Fairfield Shipyard Yard No. 1943 When built 1943  
 Engines made at Harrison, N.J. By whom made Worthington Pump & Machinery Corp. Engine No. 1943 When made 1943  
 Boilers made at By whom made Boiler No. 1943 When made 1943  
 Nominal Horse Power 668 V.M. Owners Ben Line Steamers Ltd. Port belonging to Leith

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

Date of Approval of plan Design = 250 lb/sq. in. @ Spt. outlet No. and Description or Type of Boilers 2-8" W. main type water-tube Working Pressure 230 lb Tested by Hydraulic Pressure to 375 lb Date of Test 16/3/48  
 No. of Certificate Can each boiler be worked separately Yes Total Heating Surface of Boilers 10233 sq. ft. see below  
 Is forced draught fitted Yes Area of Fire Grate (coal) in each Boiler oil fired  
 No. and type of burners (oil) in each boiler 4- No. and description of safety valves on each boiler 2 Spring loaded, high lift + 1 Lupt. valve Area of each set of valves per boiler per rule 4" x 1 1/2" Pressure to which they are adjusted 250 + 230 lb 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" approx. Height of boiler 18' 6"  
 Width and length 14' 4 1/8" x 14' 7 3/4" Steam Drums:—Number in each boiler 1 Inside diameter 47 3/8"  
 Thickness of plates 1 1/2" Range of tensile strength Are drum shell plates welded  
 or flanged Welded If fusion welded, state name of welding firm Have all the requirements of the Rules  
 for Class I vessels been complied with Description of riveting:—Circ. seams long. seams  
 Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of  
 long. joint:—Plate Rivet Diameter of tube holes in drum Pitch of tube holes  
 Percentage strength of shell in way of tubes Steam Drum Heads or Ends:—Range of tensile strength  
 Thickness of plates Radius or how stayed Size of manhole or handhole Water Drums:—Number  
 in each boiler Inside diameter Thickness of plates Range of tensile strength Are drum shell plates  
 welded or flanged If fusion welded, state name of welding firm Have all the requirements of the Rules  
 for Class I vessels been complied with Description of riveting:—Circ. seams long. seams  
 Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps  
 Percentage strength of long. joint:—Plate Rivet Diameter of tube holes in drum Pitch of tube holes  
 Percentage strength of drum shell in way of tubes Water Drum Heads or Ends:—Range of tensile strength  
 Thickness of plates Radius or how stayed Size of manhole or handhole  
 Headers or Sections:—Number 44 Material Thickness Tested by hydraulic pressure to Steam Dome or Collector:—Description of  
 Tubes:—Diameter 4" x 2" o/d Thickness 13/16" x 203" Number 624 + 88 (4") joint to shell Range of tensile  
 Inside diameter Thickness of shell plates If fusion welded, state name of welding  
 Description of longitudinal joint Diameter of rivet holes  
 Have all the requirements for the Rules for Class I vessels been complied with plate rivet  
 Pitch of rivets Thickness of straps Percentage strength of long. joint  
 Crown or End Plates:—Range of tensile strength Thickness Radius or how stayed  
 SUPERHEATER, 2 or Headers:—Number in each boiler 2 Inside diameter 7 1/4" x 7 1/4" x 5/8" thk.  
 Thickness 5/8" Material Range of tensile strength Are drum shell plates welded  
 or flanged If fusion welded, state name of welding firm Have all the requirements of the Rules  
 for Class I vessels been complied with Description of riveting:—Circ. seams long. seams  
 Diameter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of  
 long. joint:—Plate Rivet Diameter of tube holes in drum Pitch of tube holes Percentage strength of  
 drum shell in way of tubes Drum Heads or Ends:—Thickness Range of tensile strength  
 Radius or how stayed Flat Size of manhole or handhole Number, diameter, and thickness of tubes 22-7" o/d x 10 B.W.S.  
 Tested by hydraulic pressure to 375 lb/sq. in. Date of test 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 Spring loaded Area of each set  
 of valves 1 1/2" dia. 220 lb. small 230 lb/sq. in. Is easing gear fitted Yes

Spare Gear. Has the spare gear required by the Rules been supplied. Yes

The foregoing is a correct description,

Manufacturer.

Dates of Survey During progress of work in shops - -  
while building During erection on board vessel - -

Is the approved plan of boiler forwarded herewith

Total No. of visits

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

## GENERAL REMARKS (State quality of workmanship, opinions as to class, &amp;c.)

Workmanship materials appear to be good, and boiler found in good order and in my opinion is eligible for admission to class on completion.

Survey Fee ... £ : : When applied for 19  
 Travelling Expenses (if any) £ : : When received 19

Date

TUES. 23 MAR 1948

Committee's Minute

See Lib 22012

Engineer Surveyor to Lloyd's Register of Shipping.

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