

16 DEC 1943

REPORT ON WATER TUBE BOILERS.

No. 60.

Received at London Office

DEC 1943

Date of writing Report 6. 12. 1943 When handed in at Local Office 10. 12. 1943 Port of Nottingham

No. in Reg. Bk. 1 Survey held at Derby. Date, First Survey 11. 10. 43. Last Survey 10. 11. 1943.

on the 340/87/5+6 Copper Bluff ex "HEVER CASTLE" Tons { Gross 136 Net 616

Built at By whom built When built

Engines made at By whom made When made

Boilers made at Derby. By whom made International Combustion Ltd. When made 1943.

Nominal Horse Power Owners Port belonging to

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel The Steel Co. of Scotland Ltd.

Date of Approval of plan 2. 2. 43. Number and Description or Type of Boilers 2- Admiralty Type (3 Drum Small Tube). Working Pressure 225 lb/sq. in. Tested by Hydraulic Pressure to 387 lb/sq. in. Date of Test 4. 10. 43.

No. of Certificate 36/ 37. Can each boiler be worked separately Total Heating Surface of Boilers 6,300 sq. ft.

Is forced draught fitted Yes. Area of fire grate (coal) in each Boiler

No. and type of burners (oil) in each boiler 3- Admiralty Type. No. and description of safety valves on each boiler 1 set - 2 1/2" Marine Type, High Lift Area of each set of valve 9.8 sq. ins. Pressure to which they are adjusted

Are they fitted with easing gear Yes. In case of donkey boilers state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork Height of boiler Width and Length

Steam Drums:—Number in each boiler 1. Inside diameter 43. Thickness of plates 9/16. 1 3/8" (in way of tube holes)

Range of Tensile Strength 28/32 tons/sq. in. Are drum shell plates welded or flanged No. Description of riveting:—

Cir. seams Double Riveted. long. seams Double Riveted. Diameter of rivet holes in long. seams 29/32. Pitch of rivets 3.5687.

Lap of plate or width of butt straps 9 3/8. Thickness of straps 1/2. Percentage strength of long. joint:—Plate 74.6% Rivet 92.6%.

Diameter of tube holes in drum 1.015; 1.140; 1.515. Pitch of tube holes 1 1/2; 1 1/8; 2 1/4. Percentage strength of shell in way of tubes 32.3%.

Working pressure by rules 273 lb/sq. in. Steam Drum Heads or Ends:—Range of tensile strength 26/30 tons/sq. in. Thickness of plates 3/4. 9 3/8"

Radius or how stayed 42. Size of manhole or handhole 16" x 12". Working pressure by rules 295 lb/sq. in. Water Drums:—Number

in each boiler 2. Inside Diameter 22 5/8; 22 3/4. Thickness of plates 1 1/8 x 1 1/2. Range of tensile strength 28/32 tons/sq. in. Are drum shell plates

welded or flanged One end of plates seamless. Description of riveting:—Cir. seams LAP, SINGLE RIVETED long. seam Diameter of rivet holes in

long. seams Pitch of rivets Lap of plates or width of butt straps Thickness of straps

Percentage strength of long. joint:—Plate Rivet Diameter of tube holes in drum 1.015; 1.140; 1.515. Pitch of tube holes 1 1/2; 1 1/8; 2 1/4.

Percentage strength of drum shell in way of tubes 32.3%. Working pressure by rules Water Drum Heads or Ends:—Range of

Tensile strength 26/30 tons/sq. in. Thickness of plates 13/16. Radius or how stayed 43.

Size of manhole or handhole 16" x 12". Working pressure by rules 356 lb/sq. in. Headers or Sections:—Number

Material Thickness Tested by Hydraulic Pressure to Tubes:—Diameter 1; 1 1/8; 1 1/2.

Thickness 0.104; 0.116; 0.116. Number 1,068; 258; 128. Steam Dome or Collector:—Description of Joint to Shell

Inside diameter Thickness of shell plates Range of tensile strength

Description of longitudinal joint Diameter of rivet holes Pitch of rivets Lap of plate or width of

butt straps Thickness of straps Percentage strength of long. joint Plate Rivet

Working Pressure of shell by rules Crown or End Plates:—Range of tensile strength

Thickness Radius or how stayed Working pressure by rules

SUPERHEATER. Drums or Headers:—Number in each boiler Inside Diameter

Thickness Material Range of tensile strength Are drum shell plates welded

or flanged Description of riveting:—Cir. seams long. seams Diameter of rivet holes in

long. seams Pitch of rivets Lap of plates or width of butt straps 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 Working pressure by rules Drum Heads or Ends:—

Thickness Range of tensile strength Radius or how stayed Size of manhole or handhole

Working pressure by rules Number, diameter, and thickness of tubes 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 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 to Admiralty Requirements.

The foregoing is a correct description,
FOR INTERNATIONAL COMBUSTION LIMITED,
Thos Smeaton Manufacturer.

Dates of Survey During progress of work in shops - - - 11. 10. 43. - 10. 11. 43. Is the approved plan of boiler forwarded herewith No.

while During erection on board vessel - - - Total No. of visits 10

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. J. 4476. Notts. No. 58.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey in accordance with the Society's Rules, the Secretary's letters and the approved plans.

The workmanship & materials are good.

The boilers have been despatched to Blyth for installation on Blyth D.D. & Co's Vessel J. 4784.

Survey Fee ... £ 45: 0: When applied for, 10

Travelling Expenses (if any) £ 45: - - When received, 10

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation