

Rpt. 5c.

7 MAR 1944

REPORT ON WATER TUBE BOILERS.

No. 18265.

25 NOV 1944

Received at London Office

24 MAR 1944

Date of writing Report 14 March 1944 When handed in at Local Office 22nd March 1944 Port of Southampton
No. in Survey held at Southampton Date, First Survey 18th November 1943 Last Survey 21st March 1944
Reg. Bk. on the S/S "EMPIRE REST" (Number of Visits 17) Tons { Gross _____ Net _____
Built at PORT GLASGOW By whom built FERGUSON BROS (P^{rs} GLS) L^{td} When built 1944
Engines made at Do. By whom made Do. When made 1944
Boilers made at Southampton By whom made John I. Thompson & Co. Ltd. (L^{td} W 1292) When made 1944
Nominal Horse Power _____ Owners The Admiralty Port belonging to _____

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

Date of Approval of plan 26th March 1943 Number and Description or Type of Boilers Two Yarn Drum Type Working Pressure 225 lb Tested by Hydraulic Pressure to 338 lb Date of Test 21st Feb 1944
No. of Certificate 60 Can each boiler be worked separately Yes Total Heating Surface of Boilers 6320 sq ft

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

No. and type of burners (oil) in each boiler _____ No. and description of safety valves on each boiler Two High lift 2 1/2" diameter Area of each set of valve 9.31 sq ft Pressure to which they are adjusted 225 lb
Are they fitted with easing gear _____ 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 12'-3" Width and Length 12'-8" x 11'-0"

Steam Drums:—Number in each boiler One Inside diameter 3'-6" Thickness of plates 1 3/8" & 9/16"

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

Cir. seams SR Lap long. seams SR LBS Diameter of rivet holes in long. seams 29/32" Pitch of rivets 3.641"

Lap of plates or width of butt straps 9 1/8" & 8 1/8" Thickness of straps 1/2" Percentage strength of long. joint:—Plate 45.1 Rivet 73

Diameter of tube holes in drum 1 1/2" 1 1/8" & 1" Pitch of tube holes 2 1/4" 1 1/2" & 1 1/4" Percentage strength of shell in way of tubes 33

Working pressure by rules 283 lb Steam Drum Heads or Ends:—Range of tensile strength 26/30 ton Thickness of plates 1" & 1 1/8"

Radius or how stayed 3'-6" Size of manhole or handhole 12" x 16" Working pressure by rules 250 lb Water Drums:—Number

in each boiler Two Inside Diameter 23" Thickness of plates 1 1/2" Range of tensile strength 28/32 ton Are drum shell plates

welded or flanged Solid drawn Description of riveting:—Cir. seams SR Lap 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 1 1/2" 1 1/8" & 1" Pitch of tube holes 2 1/4" 1 1/2" & 1 1/4"

Percentage strength of drum shell in way of tubes 33 Working pressure by rules 589 lb Water Drum Heads or Ends:—Range of

Tensile strength 26/30 ton Thickness of plates 1" & 1 1/8" Radius or how stayed 23"

Size of manhole or handhole 12" x 16" Working pressure by rules 390 lb Headers or Sections:—Number _____

Material _____ Thickness _____ Tested by Hydraulic Pressure to _____ Tubes:—Diameter 1" 1 1/8" & 1 1/2"

Thickness 10/16" & 1 1/16" Number 454 (in boiler) 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 _____

The foregoing is a photostatic copy of the original report.

Manufacturer.

Dates of Survey { During progress of work in shops - } Nov 18, 23, 30, Dec 14, 21, 1943, Jan 4, 11, 18, 25, Feb 1, 8, 15, 21, 27, Mar 7, 14, 21, 1944 Is the approved plan of boiler forwarded herewith Yes
while { During erection on board vessel - - } _____ Total No. of visits _____

Is this boiler a duplicate of a previous case No. If so, state vessel's name and report No. See Report No. 18216

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed in

accordance with the Rules, plans, and to Admiralty requirements. The material and workmanship is good.

and has proved satisfactory under test. These boilers have been efficiently installed.

tested under hydraulic pressure and safety valves

adjusted under steam 225 lb.

Survey Fee ... £ 45-0-0 When applied for, 22/3/1944

Travelling Expenses (if any) £ _____ When received, _____

Supervision of Specification. 45-0-0 ADMIRALTY A/c rendered from _____

Committee's Minute _____ London 31 MAR '44

Assigned _____
