

REPORT ON WATER TUBE BOILERS.

No. 8661

Received at London Office

12 FEB 1945

Date of writing Report 22/12/1944 When handed in at Local Office 19 Port of MELBOURNE
No. in Survey held at Sydney N.S.W & Melbourne Date, First Survey 24 July 1942 Last Survey 21 Dec 1944
Reg. Bk. on the S.S. RIVER LODDON (Number of Visits 37) Tons Gross 4994 Net 2746
Built at Williamstown, Victoria By whom built Commonwealth Naval Dockyard When built 1944-12
Engines made at Melbourne By whom made Commonwealth Govt. Marine Engine Works. When made 1944
Boilers made at Sydney N.S.W & Melbourne By whom made Babcock & Wilcox Ltd. When made 1944
Nominal Horse Power 566 Owners Commonwealth of Australia Port belonging to Melbourne

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Broken Hill Pty. Co. Ltd.

Date of Approval of plan 26 August 1941 Number and Description or Type

Boilers 2 W.T. (Babcock & Wilcox). Working Pressure 240 lbs. Tested by Hydraulic Pressure to 410 lbs. Date of Test 19/4/43 8/4/43 12/1/44 11/1/44

No. of Certificate 180-181 Can each boiler be worked separately Yes Total Heating Surface of Boilers 203606 = 7212

Is forced draught fitted Yes and induced draught Area of fire grate (coal) in each Boiler 104.5 sq. ft.

No. and type of burners (oil) in each boiler 3 B & W Pressure atomising No. and description of safety valves on

each boiler One, double 2 1/2" High lift. Area of each set of valves per boiler { per rule Min. 8.84 sq. ins. as fitted 9.82 sq. ins. Pressure to which they

are adjusted 240 lbs./sq. in. 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'-9" from air casing Height of boiler 23 ft from tank top

Width and Length 14'-6" x 17'-0" Steam Drums:—Number in each boiler One Inside diameter 3'-6"

Thickness of plates 19/32" & 1 1/16" Range of Tensile Strength 28-32 tons per sq. inch Are drum shell plates welded

or flanged No 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:—Cir. seams D.R. long. seams D.R. with D.B.S.

Diameter of rivet holes in long. seams 29/32" Pitch of rivets 3.5" Thickness of straps 19/32" Percentage strength of

long. joint:—Plate 74.1 Rivet 91.4 Diameter of tube holes in drum 4" Pitch of tube holes 7"

Percentage strength of shell in way of tubes 74.4% of 19/32" plate Steam Drum Heads or Ends:—Range of tensile strength 26-30 tons/sq. inch

Thickness of plates 15/16" Radius or how stayed 3'-0" Size of manhole or handhole 15" x 11" MUD Water Drums:—Number

each boiler One Inside Diameter 6" sq. section Thickness of plates 3/4" Range of tensile strength 28-32 tons Are drum shell plates

welded or flanged No 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:—Cir. seams long. seam

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 19 tanks per boiler Material M.S. Thickness 11/32" (min.) Tested by Hydraulic Pressure to 410 lbs./sq. inch

Tubes:—Diameter 4" and 1 1/16" Thickness 4" tubes 1/4" & 5 L.S.G. Number 57-4, 590-1 1/16" 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

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

SUPERHEATER. Drums or Headers:—Number in each boiler Two Inside Diameter 10 1/2"

Thickness 1 1/4" Material M.S. Range of tensile strength 28-32 tons per sq. inch Are drum shell plates welded

or flanged forged seam less 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:—Cir. 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 1 1/32" (max) Pitch of tube holes 2 1/8" Percentage strength of

drum shell in way of tubes Drum Heads or Ends:—Thickness Range of tensile strength

Radius or how stayed Size of manhole or handhole Number, diameter, and thickness of tubes 84-1 1/2" dia x 8 L.S.G.

Tested by Hydraulic Pressure to 410 lbs./sq. in. Date of Test 11 & 12 January 1944 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 One 2 1/2" High lift on superheater of each boiler Area of each set

of valves 4.9 sq. ins. Pressure to which they are adjusted 220 lbs. (Owner's specification) Is easing gear fitted Yes

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

The foregoing is a correct description,

W. Reynolds

Manufacturer.

Dates During progress of 1942 24 July, 4, 27 Aug, 11 Sept, 8 Oct, 6 Nov, 1943 13 & 22 Jan. 8 & 19 April.

Is the approved plan of boiler forwarded herewith No

while During erection on 1943 6 & 23 July, 13 Aug, 9 & 29 Sept, 19 Oct, 2 & 20 Nov, 28 Dec. Total No. of visits 37

building board vessel 1944 11, 12, 23 Jan, 9 & 25 Feb, 24 Mar, 17 Apr, 22 & 24 May, 21, 30 Aug, 8 Sept, 30 Oct, 2 & 7 Nov, 14, 18, 21 December

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. RIVER DERWENT, RIVER GLENELG, ETC.

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

special Survey in accordance with the Rules & approved plans and the materials & workmanship are good. They have been

properly installed in the ship, tested under working conditions with mechanical stokers & oil burning

installation, found satisfactory & in our opinion are eligible to be classed as recommended in Machinery Report.

Survey Fee (Charged on Mach. Rpt.) When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute B. P. Fielden, P. A. McIntyre, & D. J. McFarlane

Assigned Su F.E. machy. rpt. Engineer Surveyors to Lloyd's Register of Shipping.

FRI. 16 FEB 1945

004799-004809-0118

✓ Headers, mud-drum, top & bottom superheater boxes marked 1487 G.A. or T.P.G. and covered by Glasgow Certificate No. C. 45518 dated 13 March 1942.