

REPORT ON WATER TUBE BOILERS.

No. 20120. (6)

Received at London Office

17 AUG 1945

Date of writing Report 10th July 1945 When handed in at Local Office

19

Port of

Sydney, N. S. W.

No. in Survey held at Melbourne & Whyalla Date, First Survey 16th April 1942 Last Survey 10th July 1945

Reg. Bk. on the S.S. "RIVER MURRUMBIDGEE" Number of Visits 30. Tons { Gross 5093 Net 2846

Master Built at Whyalla By whom built Broken Hill Pty Co. Ltd. When built 1945

Engines made at Sydney N.S.W. By whom made Morts Dock & Eng. Co. Ltd. When made 1945

Boilers made at Melbourne, Whyalla By whom made John Thompson & Co. Eng. Co., Broken Hill Pty Co. Ltd. When made 1945

Nominal Registered Horse Power 566. Owners Commonwealth of Australia Port belonging to Port Adelaide

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

(Letter for Record) Date of Approval of plan 26/8/41 Number and Description or Type of Boilers 2 W.T. (B & W Type) Working Pressure 240 lbs. Tested by Hydraulic Pressure to 410 lbs. Date of Test 27/7/44

No. of Certificate 114. Can each boiler be worked separately Yes Total Heating Surface of Boilers 7212 sq ft

Is forced draught fitted Yes Area of fire grate (coal) in each Boiler 104.5 sq ft Total grate area of boilers in vessel including Main and Auxiliary 209 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" dia, High lift Area of each valve 4.9 sq in (x 2) Pressure to which they are adjusted 240 lbs

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 approx 4 ft. Height of Boiler approx 23 ft. Width and Length 14'6" x 17'6"

Steam Drums:—Number in each boiler One Inside diameter 3'-6" Material of plates Boiler quality N.S. Thickness 1 1/2" & 1 1/4"

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

Cir. seams D.R. long. seams D.R. with D.R.s Diameter of rivet holes in long. seams 3 1/2" Pitch of Rivets 3.5"

Lap of plates or width of butt straps 9 5/8 & 9 1/8 Thickness of straps 1 1/2" 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 & 1 1/2" plate

If Drum has a flat side state method of staying Depth and thickness of girders at centre

(if fitted) Distance apart Number and pitch of stays in each Working pressure

by rules 250 lbs. Steam Drum Heads or Ends:—Material N.S. (flanging quality) Thickness 1 1/2" Radius or how stayed 3'-0"

Size of Manhole or Handhole 15" x 11" Mud Water Drums:—Number in each boiler One Outside Diameter 7 1/2" sq section

Material of plates N.S. (Gls Certif 45491) Thickness 3/4" Range of tensile strength Gls Certif 45491 Are drum shell plates welded or flanged Ends welded 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 4 3/4" Pitch of tube holes 7"

Percentage strength of drum shell in way of tubes Water Drum Heads or Ends:—Material Thickness

Radius or how stayed Size of manhole or handhole Headers or Sections:—Number 19 per boiler

Material N.S. Thickness 1 1/2" Tested by Hydraulic Pressure to 410 lbs Material of Stays

Area at smallest part Area supported by each stay Working Pressure by Rules Tubes:—Diameter 4" & 1 1/2"

Thickness 1 1/2" & 1 1/4" Number 57-4" Steam Dome or Collector:—Description of Joint to Shell

Percentage strength of Joint Diameter Thickness of shell plates Material

Description of longitudinal joint Diameter of Rivet Holes Pitch of Rivets Working Pressure of shell

by Rules Crown or End Plates:—Material Thickness How stayed

UPERHEATER. Type "Interdeck" Date of Approval of Plan 30/8/41 Tested by Hydraulic Pressure to 410 lbs

Date of Test 14/5/45 & 21/5/45 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2 1/2" dia "High Lift" Pressure to which each is adjusted 220 lbs per sq in Is easing gear fitted Yes

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 84, 1 1/2" & 8 L.S.G.

Spare Gear. Tubes 18 Gaskets or joints:—Manhole 6 Handhole 1000 Handhole plates 12.

The foregoing is a correct description,

The Broken Hill Pty. Co. Ltd.,

SHIPBUILDING YARD, WHYALLA.

Manufacturer.

Dates of Survey During progress of 16/4/42, 3/9/42, 22/5/43, 6/7/43, 21/10/43, 15/11/43 Is the approved plan of boiler forwarded herewith

while building During erection on 25/11/43, 22/12/43, 21/3/44, 20/4/44, 4/5/44, 31/5/44, 13/6/44, 27/7/44, 7/8/44

board vessel 26/1/45, 30/1/45, 16/2/45, 22/2/45, 26/2/45, 27/3/45 Total No. of visits 30.

11/4/45, 12/4/45, 10/5/45, 21/5/45, 12/6/45, 20/6/45, 21/6/45, 25/6/45, 10/7/45

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Boilers & Superheaters of this Vessel

have been built under Special Survey in accordance with the Rules & approved plans, and

the materials & workmanship are good. They have been fitted on board in an efficient

manner, & with mechanical stokers & oil burning installation, tested under working conditions

& found satisfactory - now eligible for record recommended in Machinery Report.

{ Survey Fee charged on Mach's Rep Travelling Expenses (if any) £ : : When applied for, 19

{ : : When received, 19

B. P. Fiedlen & G. E. Hall.

Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute FRI 24 AUG 1945

Assigned Su F.E. machy. rpt.



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Lloyd's Register

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Foundation