

## REPORT ON WATER TUBE BOILERS.

No. 5075

Received at London Office

28 JAN 1948

Date of writing Report 1-11-19 47 When handed in at Local Office

Port of NEWCASTLE N.S.W.

No. in Survey held at SYDNEY & NEWCASTLE N.S.W. Date, First Survey 9-3-46 Last Survey 22-10-1947  
 Reg. Bk. on the Single screw steamer "DELUNGRA" (Number of Visits 27) Tonnage 2332.96  
 Master Built at Newcastle N.S.W. By whom built State Dockyard. When built 1947  
 Engines made at Newcastle N.S.W. By whom made State Dockyard When made 1947  
 Boilers made at SYDNEY N.S.W. By whom made COCKATOO DOCKS & ENG. CO. PTY. LTD. When made 1946  
 Machinery Numerical Registered Horse Power 375 Owners COMMONWEALTH OF AUSTRALIA. Port belonging to Newcastle N.S.W.

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel BROKEN HILL PTY. CO. LTD.

(Letter for Record) Date of Approval of plan 1ST MAY 1944 Number and Description of Type of Boilers TWO, WATER-TUBE Working Pressure 240 lbs Tested by Hydraulic Pressure to 410 lbs Date of Test 24-5-46  
 No. of Certificate Syd No 2154 Can each boiler be worked separately YES Total Heating Surface of Boilers 5790 ft<sup>2</sup> including SUPER HEATERS & 50% ECONOMISERS  
 Is forced draught fitted YES Area of fire grate (coal) in each Boiler 58.75 ft<sup>2</sup> Total grate area of boilers in vessel including Main and Auxiliary 117.5 ft<sup>2</sup> No. and type of burners (oil) in each boiler No. and description of safety valves on each boiler DOUBLE, HIGH-LIFT Area of each valve 4.9 ft<sup>2</sup> (x2) 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 9 ft TO BUNKERS Height of Boiler 22'-6" Width and Length 63" x 18'-0"  
 Steam Drums:—Number in each boiler ONE Inside diameter 3'-6" Material of plates M.S. BOILER QUALITY Thickness 1 1/4" & 9/16"  
 Range of Tensile Strength 28-32 TONS Are drum shell plates welded or flanged NO Description of riveting—  
 Cir. seams D.R. long. seams D.R., D.B.S. Diameter of rivet holes in long. seams 29/32" Pitch of Rivets 3.49"  
 Lap of plate or width of butt straps 9 1/2" Thickness of straps 1/2" Percentage strength of long. joint:—Plate 74.1 Rivet 100.  
 Diameter of tube holes in drum 1.75" & 3.5" Pitch of tube holes 3 1/4" & 4" Percentage strength of shell in way of tubes 100.  
 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 Steam Drum Heads or Ends:—Material M.S. Thickness 51/32" 1" & 7/8" Radius or how stayed 3'-0"  
 Size of Manhole or Handhole 12" x 16" Water Drums:—Number in each boiler ONE Inside Diameter 3'-3"  
 Material of plates M.S. Thickness 1 1/4" & 9/16" Range of tensile strength 28-32 TONS Are drum shell plates welded or flanged NO Description of riveting:—Cir. seams D.R. long. seams D.R., D.B.S. Diameter of Rivet Holes in long. seams 29/32" Pitch of rivets 3.49" Lap of plates or width of butt straps 9 1/2" Thickness of straps 1/2"  
 Percentage strength of long. joint:—Plate 74.1 Rivet 100 Diameter of tube holes in drum 1.75" & 3.5" Pitch of tube holes 3 1/4" & 4"  
 Percentage strength of drum shell in way of tubes 100. Water Drum Heads or Ends:—Material M.S. Thickness 31/32" 1" & 7/8"  
 Radius or how stayed 36" Size of manhole or handhole 12" x 16" Headers or Sections:—Number Material Thickness Tested by Hydraulic Pressure to Material of Stays  
 Area at smallest part Area supported by each stay Working Pressure by Rules Tubes:—Diameter 1 3/4" & 3 1/2" (OD)  
 Thickness 1 1/4" 106. (31/32) 1/4" Number 410 & 29 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

SUPERHEATER. Type Date of Approval of Plan 8TH MARCH 1945 Tested by Hydraulic Pressure to 410 lbs.  
 Dates of Test 24/5/46 & 14/6/46 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" (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 42-1 1/8" - 10 L.S.G.  
 Spare Gear. Tubes 47 Gaskets or joints:—Manhole 6 Handhole

MARKS ON BOILERS. N° 518 LLOYDS TEST 410 LBS W.P. 240 B.P.F. 24-5-46  
 N° 519 LLOYDS TEST 410 LBS W.P. 240 A.J.M.C. 14-6-46

The foregoing is a correct description.

17 DEC 1946

Manufacturer.

Dates of Survey During progress of work in shops 9/3/45, 24/7/45, 27/8/45, 20/9/45, 24/10/45, 28/11/45, 16/12/45, 20/1/46, 24/2/46, 28/3/46, 30/4/46, 24/5/46, 14/6/46  
 while building During erection on board vessel 10 & 28/7/47, 9, 19 & 25/8/47, 1, 11, 15 & 30/9/47. Total No. of visits Twenty-seven  
 Is the approved plan of boiler for use in the vessel YES See Secretary's letters L-15/44, 9/5/44 & 8/3/45

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

These boilers have been constructed under special survey in accordance with the Rules, approved plans and the Secretary's letters. The materials were made at approved works and the workmanship is of good quality. The boilers have been properly installed, tested under working conditions and in our opinion are eligible to be classed for working pressure of 240 lbs per sq. inch (Spt. 220 lbs) to which pressures the safety valves have been adjusted.

Survey Fee Charged on Rpt 4 : When applied for, 19  
 Travelling Expenses (if any) £ : : When received, 19

B. P. Fielden &amp; Emmings.

Engineer Surveyor to Lloyd's Register of Shipping.  
Sydney NSW. Newcastle NSW.

Committee's Minute

FRI. 5 MAR 1948

Assigned For number see J.S. Rpt

Lloyd's Register  
Foundation

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