

## REPORT ON WATER TUBE BOILERS.

No. 4970

Received at London Office 31 AUG 1946

Date of writing Report 17-6-1946 When handed in at Local Office 19 Port of Brisbane

No. in Reg. Bk. Survey held at Brisbane & Sydney N.S.W. Date, First Survey 27-8-42 Last Survey 13-6-1946  
 on the S.S. "RIVER NORMAN" (Number of Visits 37) Gross 6659.17 Tons Net 3908.81  
 Master Built at Brisbane By whom built Evans Deakin & Co. Ltd. When built 1946  
 Engines made at Rocklea, Brisbane By whom made Commonwealth Government Marine Eng. Works When made 1946  
 Boilers made at Sydney N.S.W. By whom made Babcock & Wilcox Limited. When made 1946  
 Machinery Numberal 566 580 Registered Horse Power 566 580 Owners Commonwealth of Australia Dept. of Supply & Shipping Port belonging to Brisbane

## 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 Two Water Tube Working Pressure 240 lbs. Tested by Hydraulic Pressure to 410 lbs. Dates of Test 21-7-43 12-8-43  
 No. of Certificate Syd No 1580 Can each boiler be worked separately Yes Total Heating Surface of Boilers 2 @ 3606 = 7212 sq. ft. + 1240 sq. ft. = 8452 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. Press. Atomising No. and description of safety valves on each boiler One double 2 1/2" high lift. Area of each valve 9.82 sq. inches 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 Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork Height of Boiler approx. 22' 9" Width and Length 14' 6" x 17' 0"  
 Steam Drums:—Number in each boiler one Inside diameter 3' 6" Material of plates Boiler Quality N.S. Thickness 1 3/32" & 1 1/16"  
 Range of Tensile Strength 28 - 32 Tons per sq. inch. 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 inches Pitch of Rivets 3 1/2 inches  
 Lap of plate or width of butt straps 9 5/8" & 9 7/8" Thickness of straps 1 3/32" Percentage strength of long. joint:—Plate 74.1% Rivet 91.4%  
 Diameter of tube holes in drum 4 inches Pitch of tube holes 7 inches Percentage strength of shell in way of tubes 74.4% of 1 3/32" 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. (Hanging qual) Thickness 1 5/16 inch Radius or how stayed 3' 0"  
 Size of Manhole or Handhole 15" x 11" Water Drums:—Number in each boiler one Outside Diameter 7 1/2" Sq. Section  
 Material of plates mild steel Thickness 3/4 inch Range of tensile strength 28 - 32 Tons Are drum shell plates welded or flanged welded ends 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 3/64 inches Pitch of tube holes 7 inches  
 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 mild steel Thickness 1 3/32" min. 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 1/16"  
 Thickness 1/4", 5 & 8 L.S.G. Number 590 - 1 1/16" in. 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  
 UPPER HEATER\* Type "Interdeck" Date of Approval of Plan 30-8-41 Tested by Hydraulic Pressure to 410 lbs.  
 Date of Test 22-1-45 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" (High Lift) Pressure to which each is adjusted 220 lbs. 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  
 \* See Glasgow Certif C 46495 dated July 21st 1942.

The foregoing is a correct description,

Manufacturer.

Dates of Survey } During progress of 1942:—Aug 27, Sept 11. 1943:—Jan 13, 22, April 8, 19  
 while building } work in shops - 1943:—July 9, 21, Aug 12  
 Is the approved plan of boiler forwarded herewith  
 During erection on 1945 MAR 3, 15, APR 23, MAY 8, 24, JUN 20, JUL 11, SEPT 5, OCT 29, NOV 15  
 board vessel - - - DEC 3, 14, 1946 JAN 9, FEB 14, MAR 6, 19, APR 8, 11, 26, 30, MAY 4, 14, 21, 28, JUN 7, 8, 11, 13  
 Total No. of visits 37.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers and superheaters of this vessel have been built under Special Survey in accordance with the Rules and approved plans and the materials and workmanship are good. They have been fitted on board in an efficient manner and with their mechanical stokers and oil burning installation tested under working conditions and found satisfactory, now eligible for record recommended in machinery Report.

Survey Fee £... Fee charged on Machd. Rpt. : } When applied for, 19  
 Travelling Expenses (if any) £... : } When received, 19

20 SEP 1946

Committee's Minute

Assigned Su F.E. machy. rpt.

Engineer Surveyors to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation

003147-003153-0027