

# REPORT ON WATER TUBE BOILERS.

No. 844  
TUE MAY 8 1923

Received at London Office

Date of writing Report <sup>50</sup> March 22 1923 When handed in at Local Office <sup>50</sup> March 22 1923 Port of Adelaide S. Australia

No. in Survey held at Port Adelaide S.A. Date, First Survey June 20 1922 Last Survey March 15 1923

Reg. Bk. on the 3 Water Tube Boilers Babcock & Wilcox Ltd. S.S. "ERINA" Number of Visits 22 Tons { Gross 3345 Net 1908

Master Built at Port Adelaide By whom built Poole & Steel When built 1922.3

Engines made at Port Adelaide By whom made Poole & Steel Ltd When made 1922.3

Boilers made at Renfrew By whom made Babcock & Wilcox Ltd No. 176 When made 1922

Registered Horse Power 516 Owners Commonwealth Line of Steamers Port belonging to Melbourne

WATER TUBE BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~—Manufacturers of Steel (D. Colville & Sons Ltd, Stewart & Lloyd (Tubes))

(Letter for Record 65) Date of Approval of plan 12<sup>th</sup> May 1921 Number and Description or Type of Boilers 3 Water Tube Babcock & Wilcox Ltd Working Pressure 190 lbs Tested by Hydraulic Pressure to 350 lbs Date of Test 9.5.22

No. of Certificate 46 Can each boiler be worked separately No Total Heating Surface of Boilers 5289 sq ft

Is forced draught fitted Assisted Area of fire grate (coal) in each Boiler 84.5 sq ft Total grate area of boilers in vessel including Main and Auxiliary 263.8 No. and type of burners (oil) in each boiler Coal No. and description of safety valves on each boiler Two Area of each valve 9.62 sq in Pressure to which they are adjusted 190 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 24" Height of Boiler 10.42 Width and Length 12.7 x 13.32

Steam Drums:—Number in each boiler One Inside diameter 4'-0" Material of plates M. Steel Thickness 3/2 & 1"

Range of Tensile Strength 28 to 32 Tons Are drum shell plates welded or flanged No Description of riveting:—

Cir. seams D.R. Lap long. seams T.R. Lap Diameter of rivet holes in long. seams 3/32" Pitch of Rivets 3 5/8"

Lap of plate or width of butt straps 5" x 7" Thickness of straps 7/16" Percentage strength of long. joint:—Plate 75-8% Rivet 75-5%

Diameter of tube holes in drum 3 3/32" Pitch of tube holes 7" Percentage strength of shell in way of tubes 81.6%

If Drum has a flat side state method of staying Distance apart Number and pitch of stays in each Working pressure by rules 232 lbs. 0.14

Steam Drum Heads or Ends:—Material M. Steel Thickness 1/16" Radius or how stayed 3'-6"

Size of Manhole or Handhole 15" x 11" Water Drums:—Number in each boiler One Inside Diameter 6" 0 section

Material of plates M. Steel Thickness 3/4" Range of tensile strength 24 to 28 Tons Are drum shell plates welded or flanged Yes 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 43.5% Rivet Diameter of tube holes in drum 3 3/64" Pitch of tube holes 7"

Percentage strength of drum shell in way of tubes Water Drum Heads or Ends:—Material M. Steel Thickness 3/4" Radius or how stayed

Size of manhole or handhole Headers or Sections:—Number 19 Plates each boiler

Material M. Steel Thickness 1/32" Tested by Hydraulic Pressure to 540. Quick Material of Stays Tubes:—Diameter 3 7/16 & 7/16"

Area at smallest part Area supported by each stay Working Pressure by Rules Steam Dome or Collector:—Description of Joint to Shell None

Thickness 8 x 6 L.S.S. 9 x 10 L.S.S. Number 157. 270 each Steam Dome or Collector:—Diameter Thickness of shell plates Material

Percentage strength of Joint Diameter of Rivet Holes Pitch of Rivets Working Pressure of shell by Rules Crown or End Plates:—Material Thickness How stayed

SUPERHEATER. Type None Date of Approval of Plan 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

Diameter of Safety Valve Pressure to which each is adjusted Is easing gear fitted

Is a drain cock or valve fitted at lowest point of superheater Number, diameter, and thickness of tubes

Spare Gear. Tubes 24. 1 1/2 Gaskets or joints:—Manhole 36 Handhole 2000 Handhole plates 12

42. 2 1/2 1/2 Straight, Inclined & bent. The foregoing is a correct description, (Signed) Babcock & Wilcox Ltd Manufacturer.

Dates of Survey During progress of work in shops 1922. June 20. 23. July 7. 11. 14. 19. 24. 29. Aug. 4. 8. 11. 25. Is the approved plan of boiler forwarded herewith

while building During erection on board vessel 1922. 9. 5. 12. 18. 19. 22. Oct. 2. 11. Total No. of visits 21

Safety valves tested 12/3/23. Steam 15<sup>th</sup> March 1923.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The above boilers arrived from The Makers in parts in good order and condition. They were put together and sections of headers tested in shops. Connected up on board and the whole tested to 350 lbs water pressure and found satisfactory. Steam drums tested in Sydney. Safety valves adjusted to 190 lbs each. In our opinion they are fit to be classed & L.M.C. with date subject to annual survey.

Survey Fee Included in Machinery 90 lbs amount paid Sydney When applied for 191

Travelling Expenses (if any) £ When received 191

Committee's Minute FRI. 3 AUG. 1923

Assigned See Adl. 246

