

# REPORT ON WATER TUBE BOILERS.

No. 41788

Date of writing Report 1st Mar 1922 When handed in at Local Office 11th Mar 1922 Port of Glasgow Received at London Office Wed Mar 15. 1922 TUE. MAY. 8 1923

No. in Reg. Bk. 3 Survey held at Renfrew Date, First Survey 16. 9. 21 Last Survey 14. 12 1921  
on the Babcock & Wilcox Boilers No 1176 Number of Visits 8 Gross 3345 Tons Net 1908  
Master St. Adelaide Built at St. Adelaide By whom built Messrs. Poole & Steel When built 3-1923  
Engines made at Port Adelaide By whom made Messrs. Poole & Steel When made 1923  
Boilers made at Renfrew By whom made Messrs. Babcock & Wilcox Ltd When made (16. 11. 21)  
Registered Horse Power 576 Owners Commonwealth Line of Steamers Port belonging to Melbourne Vic.

**WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.** Manufacturers of Steel Stewarts & Lloyd & S. Colville & Sons  
(Letter for Record (5)) Date of Approval of plan 12th May 1921 Number and Description or Type of Boilers 3 water tube Babcock & Wilcox Working Pressure 180 lb./sq. in. Tested by Hydraulic Pressure to 250 lb. Date of Test 12th May 1922  
No. of Certificate — Can each boiler be worked separately Yes Total Heating Surface of Boilers 8289 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 253.5 sq. ft. 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 lb.  
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 in. clear Height of Boiler 10'-4 1/2" Width and Length 12'-7" x 13'-3 1/2"  
Steam Drums:—Number in each boiler One Inside diameter 4'-0" Material of plates Steel Thickness 1/32"  
Range of Tensile Strength 28/32 tons Are drum shell plates welded or flanged No Description of riveting:—  
Cir. seams DR. Lap long. seams DR. Lap Diameter of rivet holes in long. seams 27/32" Pitch of Rivets 3 3/64"  
Lap of plate (2) width of butt straps 1/5" (2) 1/4" 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 4" Percentage strength of shell in way of tubes 81.4  
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 233 lb./sq. in.  
Steam Drum Heads or Ends:—Material Steel Thickness 13/16" Radius or how stayed 3'-6"  
Size of Manhole Handhole 15" x 11" in cyl. end of shell Water Drums:—Number in each boiler One Inside Diameter 6" (square section)  
Material of plates Steel Thickness 3/4" Range of tensile strength 24 1/2 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 — Rivet — Diameter of tube holes in drum 3 3/64" Pitch of tube holes 4"  
Percentage strength of drum shell in way of tubes 43.5 Water Drum Heads or Ends:—Material Steel Thickness 3/4"  
Radius or how stayed — Size of manhole or handhole — Headers or Sections:—Number 19 pairs per boiler  
Material Steel Thickness 17/32" Tested by Hydraulic Pressure to 540 lb./sq. in. Material of Stays —  
Area at smallest part — Area supported by each stay — Working Pressure by Rules — Tubes:—Diameter 1 3/16" (2) 1 1/16"  
Thickness (1) 5/16 L.S.G. (2) 9/16 L.S.G. Number (1) 5 (2) 590 Steam Dome or Collector:—Description of Joint to Shell None  
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 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 42 in. all Gaskets or joints:—Manhole 36 Handhole 2000 Handhole plates 16  
Included. But. & fittings.

The foregoing is a correct description,  
Babcock & Wilcox Limited Manufacturer.  
(4) - Bedford

Dates of Survey 1921. Sep 16. Oct 16. Nov. 11. 11. 18. 25. Dec 5. 14. Is the approved plan of boiler forwarded herewith Yes  
During progress of work in shops — 1922  
During erection on board vessel June 20. 23. July 7. 11. 14. 19. 24. 28. Aug 26. 29. 31. 1922 Total No. of visits 8  
Sept. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 1922  
St. Adelaide S.A. 1922 Safety Valves adjusted. 12/3/22

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These boilers have been partly built at this port under special survey: the materials & workmanship, so far as advanced, are good:— the headers & drum domes have been tested to 540 lb./sq. in. the steam drum shell plates & butt straps were examined after rolling to shape and the drum ends examined on completion of shaping & machining. No rivet holes filled. These parts have now been shipped to Messrs. Poole & Steel Port Adelaide South Australia to be fitted on completion into one of their vessels.  
Survey Fee £ 14.00 When applied for 1/3 1923  
Travelling Expenses (if any) £ — When received monthly etc 191

Committee's Minute FRI. 3 AUG. 1923  
Assigned See Add 846

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