

# REPORT ON WATER TUBE BOILERS.

No. 49548

Received at London Office

Report 191 When handed in at Local Office 2.8.1929 Port of Glasgow  
 Survey held at Renfrew  
 on the Boilers No. 6/1243  
 Date, First Survey 24<sup>th</sup> Jan 1929. Last Survey 26<sup>th</sup> July 1929  
 Number of Visits 34  
 Tons Gross 1619  
 Net 744  
 Built at Grangemouth By whom built Grangemouth D.C. Ltd NO 46  
 When built 1929  
 Made at Renfrew By whom made Babcock & Wilcox Ltd  
 When made 1929  
 Horse Power Owners Christmas Island Phosphate Co. Ltd  
 Port belonging to

**WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.**—Manufacturers of Steel **S. Colville & Sons**  
 or Record **S** Date of Approval of plan **30-1-29 26-3-29 12-6-29** Number and Description or Type  
**Two Babcock & Wilcox Type** Working Pressure **190** Tested by Hydraulic Pressure to  
 Certificate Can each boiler be worked separately. **yes** Total Heating Surface of Boilers **4068 sq ft**  
 draught fitted **yes** Area of fire grate (coal) in each Boiler  
 Auxiliary No. and type of burners (oil) in each boiler **2 - Clyde Oil Unit** Total grate area of boilers in vessel including  
**1-2 1/4 dia Double Spring Cochran** Area of each valve No. and description of safety valves on  
 fitted with easing gear **yes** In case of donkey boilers state whether steam from main boilers can enter the donkey boiler  
 distance between boilers or uptakes and bunkers or woodwork  
 drums:—Number in each boiler **One** Inside diameter **3' 5 1/2"** Height of Boiler **15' 10"** Width and Length **11' 7" x 14' 6"**  
 Tensile Strength **28-32 tons** Material of plates **Steel** Thickness **17/32" T.P. 1/16"**  
**D.R. Lap** long. seams **D.R.D.B.S.** Are drum shell plates welded or flanged **no** Description of riveting:—  
 plate or width of butt straps **9" MEAN** Thickness of straps **17/32"** Diameter of rivet holes in long. seams **27/32"** Pitch of Rivets **3" x 3 3/16"**  
 of tube holes in drum **4 3/64"** Pitch of tube holes **7"** Percentage strength of long. joint:—Plate **71.88** Rivet **94**  
 has a flat side state method of staying  
 Distance apart  
 Number and pitch of stays in each  
 Working pressure  
 Manhole or Handhole **15" x 11"** Material **Steel** Thickness **15/16"** Radius or how stayed **3' 0"**  
 of plates **Steel** Thickness **3/4"** Water Drums:—Number in each boiler **One** Inside Diameter **6" x 6"**  
 d. **Welded** Description of riveting:—Cir. seams  
 long. seams  
 Pitch of rivets  
 Lap of plates or width of butt straps  
 Diameter of Rivet Holes in  
 ge strength of long. joint:—Plate  
 Rivet  
 Diameter of tube holes in drum **4 3/64"** Thickness of straps  
 ge strength of drum shell in way of tubes **42.2** **MUD** Water Drum Heads or Ends:—Material **Steel** Thickness **3/4"**  
 or how stayed **Flat** Size of manhole or handhole  
 Headers or Sections:—Number **14 Pairs for B.R.**  
**Steel** Thickness **7/16"** Tested by Hydraulic Pressure to **340 lb.** Material of Stays  
 smallest part **4 1/4"** Area supported by each stay  
 Working Pressure by Rules **324 lb.** Tubes:—Diameter **4" 1 1/16"**  
**4 1/4" 16 1/16"** Number **42 off 4"** **430" 1 1/16"** Steam Dome or Collector:—Description of Joint to Shell  
 ge strength of Joint  
 Diameter  
 Thickness of shell plates  
 Material  
 tion of longitudinal joint  
 Diameter of Rivet Holes  
 Pitch of Rivets  
 Working Pressure of shell  
**Crown or End Plates:—Material** Thickness How stayed  
**HEATER.** Type Date of Approval of Plan Tested by Hydraulic Pressure to  
 Test Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler  
 r of Safety Valve Pressure to which each is adjusted Is easing gear fitted  
 ain cock or valve fitted at lowest point of superheater Number, diameter, and thickness of tubes  
 Gear. Tubes **30 @ 4"** Gaskets or joints:—Manhole **12** Handhole **24** Handhole plates  
**60 @ 1 1/16"**

The foregoing is a correct description,

**Babcock & Wilcox, Ltd.** Manufacturer.

During progress of work in shops:—**1929 Jan 24-29 30 Feb 7-11 20 Mar 6-11-18** Is the approved plan of boiler forwarded herewith  
 During erection on board vessel:—**21 26 28 Apr 11-19-29 May 2-10 13-16-17-21-24** Total No. of visits **39**  
**30-31 June 10-12-17-20-21 July 1-5-8-23-26**

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) **These steam and water drums, mud-**  
**ms, and Sections have been built under survey, in accordance with the Rules**  
**d approved plans. The materials and workmanship are good. These boilers have**  
**en dispatched to Messrs Grangemouth Dockyard Co Ltd, and intended for vessel**  
**Yo. 416**

Survey Fee **Total.. £26-1-0** When applied for, **London**  
 Travelling Expenses (if any) £ When received, **23/10/29**

**G. E. Murdoch**  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 3- SEP 1929**  
 Signed **TRANSMIT TO LONDON**

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