

# REPORT ON WATER TUBE BOILERS.

No. 49892

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No. in Survey held at Grangemouth Date, First Survey 20.3.29 Last Survey 22-11-29  
 Reg. Bk. on the Twin Sc. Steamer Islander Number of Visits 22 Gross 1619 Tons Net 744  
 Master Built at Grangemouth By whom built Grangemouth Dryd Co When built 1929  
 Engines made at Newbury By whom made Plenty & Son Ltd When made 1929  
 Boilers made at Renfrew By whom made Babcock & Wilcox Ltd When made 1929  
 Registered Horse Power \_\_\_\_\_ Owners Christmas Island Phosphate Co Ltd Port belonging to \_\_\_\_\_

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel

Letter for Record \_\_\_\_\_ Date of Approval of plan \_\_\_\_\_ Number and Description or Type of Boilers 2 Babcock & Wilcox type Working Pressure 190 lbs Tested by Hydraulic Pressure to 400 lbs Date of Test 2/9/29  
 No. of Certificate \_\_\_\_\_ Can each boiler be worked separately Yes Total Heating Surface of Boilers \_\_\_\_\_  
 Is forced draught fitted Yes Area of fire grate (coal) in each Boiler \_\_\_\_\_ Total grate area of boilers in vessel including Main and Auxiliary \_\_\_\_\_  
 No. and type of burners (oil) in each boiler 2 Clyde-oil fuel No. and description of safety valves on each boiler 1-2 1/4" Lobe Spring High Lift Area of each valve 3.985 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 on woodwork well clear Height of Boiler \_\_\_\_\_ Width and Length \_\_\_\_\_  
 Steam Drums:—Number in each boiler \_\_\_\_\_ Inside diameter \_\_\_\_\_ Material of plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 Range of Tensile Strength \_\_\_\_\_ Are drum shell plates welded or flanged \_\_\_\_\_ Description of riveting:—  
 Cir. seams \_\_\_\_\_ long. seams \_\_\_\_\_ Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of Rivets \_\_\_\_\_  
 Lap of plate or width of butt straps \_\_\_\_\_ Thickness of straps \_\_\_\_\_ Percentage strength of long. joint:—Plate \_\_\_\_\_ Rivet \_\_\_\_\_  
 Diameter of tube holes in drum \_\_\_\_\_ Pitch of tube holes \_\_\_\_\_ Percentage strength of shell in way of tubes \_\_\_\_\_  
 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 \_\_\_\_\_ Thickness \_\_\_\_\_ Radius or how stayed \_\_\_\_\_  
 Size of Manhole or Handhole \_\_\_\_\_ Water Drums:—Number in each boiler \_\_\_\_\_ Inside Diameter \_\_\_\_\_  
 Material of plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Are drum shell plates welded or flanged \_\_\_\_\_  
 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 \_\_\_\_\_ Pitch of tube holes \_\_\_\_\_  
 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 \_\_\_\_\_  
 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 \_\_\_\_\_  
 Thickness \_\_\_\_\_ Number \_\_\_\_\_ 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 \_\_\_\_\_ 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 \_\_\_\_\_  
**SAFETY GEAR.** Tubes \_\_\_\_\_ Gaskets or joints:—Manhole \_\_\_\_\_ Handhole \_\_\_\_\_ Handhole plates \_\_\_\_\_

The foregoing is a correct description, \_\_\_\_\_  
 Manufacturer.

Dates of Survey \_\_\_\_\_ During progress of work in shops - - -  
 while building \_\_\_\_\_ During erection on board vessel - - -  
 Is the approved plan of boiler forwarded herewith Yes  
See Accompanying Machinery Report Total No. of visits 22 Gls Rpt 49562.

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

These boilers have been properly assembled and secured in the vessel, tested by hydraulic pressure to 400 lbs and found satisfactory. The safety valves have been adjusted to 190 lbs, and the thicknesses of casen Port Bl:  $\frac{P}{32}$  -  $\frac{S}{32}$  - Stbd Bl  $\frac{P}{16}$  -  $\frac{S}{18}$ .

Survey Fee ... £ \_\_\_\_\_ When applied for, 1911  
 Travelling Expenses (if any) £ \_\_\_\_\_ When received, 1911

H. L. Sutherst.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_  
 signed See Gls Rpt attached

TUE 10 DEC 1929



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