

## REPORT ON WATER TUBE BOILERS.

No. 58862

Received at London Office

SEP 22 1937

Date of writing Report 9 Sept 1937 When handed in at Local Office 18.9.1937 Port of Glasgow.

No. in Reg. Bk. Survey held at Renfrew on the new steel S.S. IRON KNIGHT. Number of Visits 47 Gross 4812 Tons Net 2737

Master Built at Glasgow By whom built Lithgow & Co (No 902) When built 1934

Engines made at Glasgow By whom made J. Rowan & Co (No 1004) When made 1934

Boilers made at Renfrew By whom made Babcock & Wilcox Ltd (No 6/1320) When made 1934

Nominal Horse Power 440.8 Owners Broken Hill Proprietary Co. Port belonging to Melbourne

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Co. of Scotland.

Letter for Record Date of Approval of plan 27/11/36 & 2/12/36 Number and Description or Type Boilers Three - Babcock & Wilcox Working Pressure 250 lb Tested by Hydraulic Pressure to 425 lb Date of Test 1-7-37

No. of Certificate 19978 GA Can each boiler be worked separately Yes Total Heating Surface of Boilers 6612 sq ft

forced draught fitted Area of fire grate (coal) in each Boiler 65 sq ft Total grate area of boilers in vessel including main and Auxiliary No. and type of burners (oil) in each boiler No and description of safety valves on each boiler

Are they fitted with easing gear 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 Height of Boiler 9' 8" approx Width and Length 11' 6" approx

Steam Drums:—Number in each boiler 1 Inside diameter 3' 6" Material of plates Steel Thickness 1 1/2" 3/32"

Range of Tensile Strength 28-32 Ton 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" Pitch of Rivets 3.48"

Gap of plate or width of butt straps 9 1/2" x 9 1/2" Thickness of straps 19/32" Percentage strength of long. joint:—Plate 74.06 Rivet 91.79

Diameter of tube holes in drum 4" Pitch of tube holes 4" H.P. x 6" V.P. Percentage strength of shell in way of tubes 42.8

Drum has a flat side state method of staying Depth and thickness of girders at centre

fitted Distance apart Number and pitch of stays in each Working pressure

Rules 250 lb. Steam Drum Heads or Ends:—Material Steel Thickness 15/16" Radius or how stayed 3' 0"

Size of Manhole or Handhole 15" x 11" MUD Water Drums:—Number in each boiler 1 Inside Diameter 7 1/2" sq section

Material of plates Steel Thickness 3/4" Range of tensile strength 28/32 Ton Are drum shell plates welded

or flanged Ends welded 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 3/4" Pitch of tube holes 4"

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 14 per boiler

Material Steel Thickness 1/2" min Tested by Hydraulic Pressure to 425 lb Material of Stays

Area at smallest part Area supported by each stay Working Pressure by Rules 250 lb Tubes:—Diameter 4" 8 1/16"

Thickness 1/2" - 8 9/16" Number 394 @ 1/16" 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 B & W Date of Approval of Plan 28-1-37 Tested by Hydraulic Pressure to 425 lb (brass)

Date of Test 9-9-37 Various 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" Single Pressure to which each is adjusted Is easing gear fitted

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 130 - 1 1/2" 00 9.454

Spare Gear. Tubes 10 @ 4" Gaskets or joints:—Manhole 6 Handhole 512 Handhole plates 14

14 @ 1 1/2"

The foregoing is a correct description,

Babcock &amp; Wilcox, Ltd

Manufacturer.

Dates During progress of 1936 Nov. 27 Dec. 2. 24. 30 (1937) Jan. 15. 21. 28 Is the approved plan of boiler forwarded herewith NO - retained with duplicate contract 6/1321.

of Survey work in shops - Feb. 5. 12. 23. 25 Mar. 3. 4. 12. 17. 19. 23 Apr. 7. 22

while During erection on 23. 28. 30 May 7. 13. 14. 17. 18. 19. 21. 25. 31 June 1

building board vessel - 3. 4. 17. 21. 23 July 1. 6 Aug. 2. 3. 5. 9. 31 Sep. 2. 8. 14

Total No. of visits 47

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

These boilers have been built under Special Survey to approved plans in accordance with the Society's Rules. Materials and workmanship are good. They are intended for M<sup>r</sup> Lithgow's Yard No 902, M<sup>r</sup> Brown's Eng<sup>s</sup> No 1004.

Survey Fee ... £ 34/11/0. When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

MONTHLY ACCOUNT

H. Sutherland.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 21 SEP 1937

Assigned TRANSMIT TO LONDON



© 2019

Lloyd's Register  
Foundation

12180-0250