

## REPORT ON WATER TUBE BOILERS.

No. 62833  
SEP 19 1940

Received at London Office

9 APR 1942

Date of writing Report 9<sup>th</sup> Sept 1940 When handed in at Local Office 14<sup>th</sup> Sept 1940 Port of Glasgow

No. in Survey held at Renfrew Date, First Survey 6:11:39 Last Survey 26<sup>th</sup> Aug 1940

Reg. Bk. on the "LLANDUDNO" Number of Visits 31 Tons 31

Master Built at Port Glasgow By whom built W Hamilton & Co Ltd J1029 When built

Engines made at By whom made 10/1844 When made

Boilers made at Renfrew By whom made Babcock & Wilcox Ltd J1029 When made 1940

Registered Horse Power Owners Port belonging to

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

(Letter for Record W.T.) Date of Approval of plans 20-22/1/39, 28/2/39, 6/1/40, 6/5/40 Number and Description or Type 26-4-40

of Boilers 2 Thornycroft Type Working Pressure 250 lb. Tested by Hydraulic Pressure to 375 lb. Date of Test 28-4-40

No. of Certificate 20556 Can each boiler be worked separately Yes Total Heating Surface of Boilers 3400

Is forced draught fitted ✓ 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 4 - Admiralty Type No. and description of safety valves on

each boiler One 2 1/2" Double Spring High Lift Valve Area of each valve 4.9 sq Pressure to which they are adjusted 250 lbs. 4C

Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boiler's can enter the donkey boiler. Anterior of drum & level of drum

Smallest distance between boilers or uptakes and bunkers or woodwork ✓ Height of Boiler 6' 6 1/2" Anterior Width and Length 10' 4 1/2" 8' 3"

Steam Drums:—Number in each boiler one Inside diameter 3' 4" Material of plates Steel Thickness 9/16" x 1 1/8"

Range of Tensile Strength 28/32 ton Are drum shell plates welded or flanged Long seam sealed by electric welding at ends (okh) Description of riveting:—

Cir. seams D.R. Lah long. seams D.R.D.B.S Diameter of rivet holes in long. seams 29/32" Pitch of Rivets 3.428"

Lap of plate or width of butt straps 9 3/4" outside 8 1/4" inside Thickness of straps 1/2" Percentage strength of long. joint:—Plate 73.5 Rivet 98.62

Diameter of tube holes in drum 1" x 1 1/2" Pitch of tube holes 1 1/2" x 2 1/4" Percentage strength of shell in way of tubes 33.3

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 apk 250 lbs. Steam Drum Heads or Ends:—Material Steel Thickness 15/16" front 3/4" back Radius or how stayed 3' 4"

Size of Manhole or Handhole 16 x 12 Water Drums:—Number in each boiler Two Inside Diameter 1' 11"

Material of plates Steel Thickness 9/16" x 1 1/2" Range of tensile strength 28/32 ton Are drum shell plates welded

or flanged Long seam sealed by electric welding at ends (okh) Description of riveting:—Cir. seams D.R. Lah long. seams D.R.D.B.S Diameter of Rivet Holes in

long. seams 29/32" Pitch of rivets 3.267" Lap of plates or width of butt straps 8 3/4" outside 8 1/4" inside Thickness of straps 1/2"

Percentage strength of long. joint:—Plate 74.16 Rivet 89.6 Diameter of tube holes in drum 1" x 1 1/2" Pitch of tube holes 1 1/2" x 2 1/4"

Percentage strength of drum shell in way of tubes 33.3% Water Drum Heads or Ends:—Material Steel Thickness 15/16" front 3/4" back

Radius or how stayed 1' 11" Size of manhole or handhole 16 x 12" 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 1" 10/16" x 1 1/2" 10/16"

Thickness 104 & 116 Number 1044 - 1" dia at 130 - 1 1/2" 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 ✓

UPERHEATER. 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 ✓

Spare Gear. Tubes 33-1 1/2" dia 10/16" Gaskets or joints:—Manhole 1 Water drum Handhole ✓ Handhole plates ✓

The foregoing is a correct description,

Babcock & Wilcox Ltd  
J. W. Block Manufacturer.

Dates of Survey while building: During progress of work in shops - 1939 Nov. 6-15 Dec. 7-13-18-29 (1940) Jan. 8-16  
During erection on board vessel - 23-29 Feb. 5-8-16-24-28-29 Mar. 15-26-29 Apr. 1-10-17-23-26-30 May 13-22-27 July 1-17 Aug. 1-26

Is the approved plan of boiler forwarded herewith ✓ Duplicate of boiler supplied for J1028 - Cl. no. 62677  
Total No. of visits 31

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

These boilers have been constructed under Special Survey in accordance with the Society's Rules and approved plans & also in accordance with Statement of Requirements. The materials and workmanship are good.

These boilers have been despatched to Messrs Hamilton & Co Ltd for installation in the vessel.

Survey Fee ... £ : : When applied for, 19

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

G. Anderson

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 17 SEP 1940

Assigned referredLloyd's Register  
Foundation