

REPORT ON WATER TUBE BOILERS.

No. 62833
SEP 19 1940

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

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

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

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 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 Yes Area of fire grate (coal) in each Boiler 4.9 sq ft Total grate area of boilers in vessel including Main and Auxiliary 4.9 sq ft No. and type of burners (oil) in each boiler 4 - Admiralty Type No. and description of safety valves on each boiler One 3/4" Double Spring High Lift Valve (Babcock Cockburn Malcolm Type) Area of each valve 4.9 sq ft Pressure to which they are adjusted 250 lbs. WC

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

Smallest distance between boilers or uptakes and bunkers or woodwork 10' 4 1/2" Height of Boiler 6' 6 1/2" Width and Length 10' 4 1/2" x 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 at ends by elec welds (admiralty) 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 3/8" x 8 1/2" min 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 Yes Depth and thickness of girders at centre

(if fitted) Yes Distance apart Yes Number and pitch of stays in each Yes Working pressure by rules 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 elec Description of riveting:—Cir. seams D.R. Lah long. seams D.R.D.B.S. Diameter of Rivet Holes in long. seams 27/32" 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 Yes Thickness Yes Tested by Hydraulic Pressure to Yes Material of Stays

Area at smallest part Yes Area supported by each stay Yes Working Pressure by Rules Yes Tubes:—Diameter 1" 10" x 1 1/2" 10"

Thickness 104 & 116 Number 1044 - 1" dia ext 130 - 1 1/2" dia int Steam Dome or Collector:—Description of Joint to Shell Yes

Percentage strength of Joint Yes Diameter Yes Thickness of shell plates Yes Material Yes

Description of longitudinal joint Yes Diameter of Rivet Holes Yes Pitch of Rivets Yes Working Pressure of shell by Rules Yes

Crown or End Plates:—Material Yes Thickness Yes How stayed Yes

UPERHEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes

Date of Test Yes Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve Yes Pressure to which each is adjusted Yes Is easing gear fitted Yes

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes Yes

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

The foregoing is a correct description,
Babcock & Wilcox Ltd Manufacturer.

Dates of Survey } During progress of work in shops - - - } 1939 Nov: 6-15 Dec: 7-13-18-29 (1940) Jan: 8-16 } Is the approved plan of boiler forwarded herewith Yes
while building } During erection on board vessel - - - } 23-29 Feb: 5-8-16-24-28-29 Mar: 15-26-29 Apr: Total No. of visits 31
1-10-17-23-26-30 May 13-22-27 July: 17 Aug: 1-26

GENERAL REMARKS (State quality of workmanship, opinions as to class, &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 Yard 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 referred

