

REPORT ON WATER TUBE BOILERS.

No. 59278

FEB 16 1938

Received at London Office
 Date of writing Report 7 Feb 1938. When handed in at Local Office 15.2.1938 Port of Glasgow.
 No. in Survey held at Renfrew. Date, First Survey 20.5.37 Last Survey 7. Feb 1938
 Reg. Bk. on the agf Number of Visits 24
 Master Built at Middlesbrough By whom built Furness S.B.Co. No 278. When built
 Engines made at Hatherlypool. By whom made Richardsons Westgarth Old 2690. When made 1938.
 Boilers made at Renfrew. By whom made Babcock & Wilcox Ltd - No 6/1329. When made 1938.
 Registered Horse Power Owners Port belonging to

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

(Letter for Record) Date of Approval of plan 8-3-37. Number and Description or Type of Boilers Two - Babcock & Wilcox Type. Working Pressure 180 lb. Tested by Hydraulic Pressure to 320. Date of Test 4.2.38.
 No. of Certificate 20105. Can each boiler be worked separately. Yes. Total Heating Surface of Boilers 6520 sq ft.

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. 3. Swinney's No 7. No and description of safety valves on each boiler. 2. Imp. High Lift. Area of each valve. 5.940 sq in. Pressure to which they are adjusted. 187 lb.

Are they fitted with easing gear. Yes. In case of donkey boilers state whether steam from main boilers can enter the donkey boiler. 12'-10 1/2" x 11'-6" approx. Width and Length 13'-6 3/4" approx. Height of Boiler. 11'-6" approx. Thickness 1/2" & 1 1/16".

Smallest distance between boilers or stays and bunkers or woodwork. 18". Steam Drums:—Number in each boiler One. Inside diameter 3'-6". Material of plates Steel. Thickness 1/2" & 1 1/16".

Range of Tensile Strength 28-32 Tons. 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 27/32". Pitch of Rivets 3.229".

Lap of plate or width of butt straps 9 1/16". Thickness of straps 1/2". Percentage strength of long. joint:—Plate 73.8%. Rivet 102.0%. Diameter of tube holes in drum 4 3/64". Pitch of tube holes 4"x6". Percentage strength of shell in way of tubes.

If Drum has a flat plate stay. No. Rivets 63.14%. 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 Steel. Thickness 3/4" plate. Radius or how stayed 3'-0".

Size of Manhole or Handhole 16"x12". Water Drums:—Number in each boiler 1. Inside Diameter 6" Sq. section. Material of plates Steel. Thickness 3/4". Range of tensile strength 28-32 Tons. Are drum shell plates welded or flanged. Solid drawn. 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 3/64". 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 4 1/16" sq. Headers or Sections:—Number 18. Material Steel. Thickness 1 1/32" minimum. Tested by Hydraulic Pressure to 320 lb. Material of Stays. Tubes:—Diameter 4" & 1 1/16" O.D.

Area at smallest part. Area supported by each stay. Working Pressure by Rules 180 lb. Thickness 1/4"-6 L.S.G.; 10 L.S.G. Number 628 @ 1 1/16" 56 @ 4". 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. Spare Gear. Tubes. Gaskets or joints:—Manhole. Handhole. Handhole plates.

The foregoing is a correct description,

Babcock & Wilcox, Ltd

Manufacturer.

Dates of Survey: During progress of work in shops 1937 May: 20-25 June: 14-15-24 Aug: 15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Is the approved plan of boiler forwarded herewith? no - duplicate. During erection on board vessel 1937 Sep: 3-15 Oct: 6-12-14-21 Nov: 12-19 Dec: 2-17-21-24 (1938) Jan: 17-26 Feb: 1-4-7. Total No. of visits 24. Plans retained for dup No 6/1327.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &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 Mr Richardsons Westgarth's Exps: No 2690, for Mr Furness S.B.Co. Yard No 278.

15/2/38. Boilers examined during installation and afterwards under full working conditions. Found satisfactory.

Survey Fee ... £ 34/4/0. When applied for, 19. Travelling Expenses (if any) £ : : When received, 19.

Committee's Minute GLASGOW 15 FEB 1938. Assigned TRANSMIT TO LONDON. H. Sutherst & J. Brooks Smith. Engineer Surveyor to Lloyd's Register of Shipping.

TUE 3 MAY 1938. See Ind. J.E. 16303.

Lloyd's Register Foundation W213-0129