

REPORT ON WATER TUBE BOILERS.

No. 70651

Date of writing Report 19... When handed in at Local Office *So. 4. A* Received at London Office *MAY 1946*
 No. in Survey held at *Penryn* Port of *Glasgow*
 Reg. Book. Date, First Survey *5th Apr 1945* Last Survey *26th Apr 1946*
 on the *SING. SC. BEAVERLAKE* (Number of Visits *18*)
 Built at *Port Glasgow* By whom built *Lithgow & Co.* Tons Gross *9824*
 Engines made at *Belfast* By whom made *W. & A. Mitchell & Co.* Net *5818*
 Boilers made at *Penryn* By whom made *Babcock & Wilcox Ltd.* Yard No. *1003* When built *1946*
 Nominal Horse Power. Owners. *Banchar & Phipps Ltd.* Boiler No. *106/1809* When made *1946*
 Port belonging to *Rover*

WATER TUBE BOILERS - MAIN, AUXILIARY, OR DONKEY. - Manufacturers of Steel *English Steel Corp. Ltd.*

Date of Approval of plan *27-6-44* Working Pressure *850 lb.* Tested by Hydraulic Pressure to *1325 lb.* No. and Description or Type *1925 lb. Date of Test 14-12-45*
 of Boilers *22078* Can each boiler be worked separately *Yes* Total Heating Surface of Boilers *7660 sq. ft.*
 No. of Certificate *22078* Is forced draught fitted *Yes* Area of Fire Grate (coal) in each Boiler *5. Wallboard (slipway type)*
 No. and type of burners (oil) in each boiler *1 - 2" x 3" combined I.H.L. Double Safety valve* No. and description of safety valves on *2" - 855 lbs. on Sp. Headers. 5.47" 10.25"*

each boiler *1 - 2" x 3" combined I.H.L. Double Safety valve* Area of each set of valves per boiler *per rule 5.47" 10.25"*
 are adjusted *3" - 855 lbs.* Are they fitted with easing gear *Yes* In case of donkey boilers state whether steam from main boilers can enter *Yes*
 the donkey boiler *Yes* Smallest distance between boilers or uptakes and bunkers or woodwork *No woodwork* Height of boiler *17'-2"*

Width and length *15'-4" x 16'-8"* Steam Drums: - Number in each boiler *One* Inside diameter *42"*
 Thickness of plates *3"* Range of tensile strength *34/38 tons* Are drum shell plates welded *Yes*
 or flanged *Solid forged* If fusion welded, state name of welding firm *Yes* Have all the requirements of the Rules *Yes*
 for Class I vessels been complied with *Yes* Description of riveting: - Circ. seams *Yes* long. seams *Yes*

Diameter of rivet holes in long. seams *Yes* Pitch of rivets *Yes* Thickness of straps *Yes* Percentage strength of *Yes*
 long. joint: - Plate *Yes* Rivet *Yes* Diameter of tube holes in drum *2 1/2" x 7"* Pitch of tube holes *5" x 1'-2"*
 Percentage strength of shell in way of tubes *49%* Steam Drum Heads or Ends: - Range of tensile strength *34/38 tons* Water Drums: - Number *Yes*
 Thickness of plates *Yes* Radius or how stayed *1'-4"* Size of manhole or handhole *12" x 16"* Are drum shell plates *Yes*
 in each boiler *One* Inside diameter *24"* Thickness of plates *2"* Range of tensile strength *34/38 tons* Have all the requirements of the Rules *Yes*
 welded or flanged *Solid forged* If fusion welded, state name of welding firm *Yes* Description of longitudinal joint *Yes* Range of tensile *Yes*
 for Class I vessels been complied with *Yes* Have all the requirements for the Rules for Class I vessels been complied with *Yes* Diameter of rivet holes *Yes*
 Diameter of rivet holes in long. seams *Yes* Pitch of rivets *Yes* Thickness of straps *Yes* plate *Yes* rivet *Yes*
 Percentage strength of long. joint: - Plate *Yes* Rivet *Yes* Diameter of tube holes in drum *2 1/2" x 7"* Pitch of tube holes *5" x 1'-2"*
 Percentage strength of drum shell in way of tubes *49%* Water Drum Heads or Ends: - Range of tensile strength *34/38 tons* Size of manhole or handhole *12" x 16"*
 Thickness of plates *Integral with drum* Radius or how stayed *Yes* Tested by hydraulic pressure to *Yes* Steam Dome or Collector: - Description of *Yes*
 Headers or Sections: - Number *Yes* Material *Yes* Thickness *Yes* Number *21402 1/2" : 607"* Thickness of shell plates *Yes* Range of tensile *Yes*
 Tubes: - Diameter *2 1/2" x 7"* Thickness *4 W.G. + 1/2"* Inside diameter *Yes* Description of longitudinal joint *Yes* If fusion welded, state name of welding *Yes*
 joint to shell *Yes* Have all the requirements for the Rules for Class I vessels been complied with *Yes* Diameter of rivet holes *Yes*
 strength *Yes* Thickness of straps *Yes* Percentage strength of long. joint *Yes* plate *Yes* rivet *Yes*
 firm *Yes* Description of longitudinal joint *Yes* Range of tensile *Yes* Diameter of rivet holes *Yes*
 Pitch of rivets *Yes* Thickness of straps *Yes* Percentage strength of long. joint *Yes* plate *Yes* rivet *Yes*
 Crown or End Plates: - Range of tensile strength *Yes* Thickness *Yes* Radius or how stayed *Yes* Are drum shell plates welded *Yes*
 SUBERHEATER *REHEATER* Drums or Headers: - Number in each boiler *One of each made by the Superheater Co. Ltd.* Inside diameter *Yes*
 Thickness *Yes* Material *Yes* Range of tensile strength *Yes* Have all the requirements of the Rules *Yes*
 or flanged *Yes* If fusion welded, state name of welding firm *Yes* long. seams *Yes* Percentage strength of *Yes*
 for Class I vessels been complied with *Yes* Description of riveting: - Circ. seams *Yes* long. seams *Yes* Percentage strength of *Yes*
 Diameter of rivet holes in long. seams *Yes* Pitch of rivets *Yes* Thickness of straps *Yes* Pitch of tube holes *Yes* Percentage strength of *Yes*
 long. joint: - Plate *Yes* Rivet *Yes* Diameter of tube holes in drum *Yes* Range of tensile strength *Yes*
 drum shell in way of tubes *Yes* Size of manhole or handhole *Yes* Number, diameter, and thickness of tubes *Yes*
 Radius or how stayed *Yes* Date of test *Yes* Is a safety valve fitted *Yes* each section of the superheater which *Yes*
 Tested by hydraulic pressure to *does not apply in this case* No. and description of safety valves *Yes* Area of each set *Yes*
 of valves *Yes* Pressure to which they are adjusted *Yes* Is easing gear fitted *Yes*

Spare Gear. Has the spare gear required by the Rules been supplied *Yes*
 Heating Surface of Superheater *1850 sq. ft.*
 of Reheater *1550 sq. ft.*
 Total H.S. of economiser *4280*
 The foregoing is a correct description.

Dates of Survey *1945 Oct 5 & 17, Nov 14, Dec 14, 21, Aug 29, 1946 Jan 10, 18, 24, 31, Feb 7, 14, 21, 28, 1946* Is the approved plan of boiler forwarded herewith *Yes*
 while building *Yes* Total No. of visits *18*

Is this boiler a duplicate of a previous case *Yes* If so, state vessel's name and report No. *GL. Rpt. No. 70347*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c. *This boiler has been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. It has been sent to the shipbuilders for installation in the vessel.*

Survey Fee *£57* When applied for *Monday*
 Travelling Expenses (if any) *£* When received *19*

Date *GLASGOW 30 APR 1946 12 NOV 1946*
 Committee's Minute *Deferred for completion*

Engineer Surveyor to Lloyd's Register of Shipping. *M. J. Brown*

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