

Rpt. 5c.

REPORT ON WATER TUBE BOILERS.

No. 41621

Date of writing Report *19th Dec 1921* When handed in at Local Office *24th Dec 1921* Port of *Glasgow*
 Received at London Office
 No. in Survey held at *Renfrew* Date, First Survey *10th Apr 1918* Last Survey *15th Dec 1921*
 Reg. Bk. on the *3 Babcock & Wilcox Bhrs 101104* Number of Visits *21*
 Master Built at By whom built Tons } Gross
 Engines made at By whom made When built } Net
 Boilers made at *Renfrew* By whom made *Messrs Babcock & Wilcox Ltd* When made *1921*
 Registered Horse Power Owners Port belonging to

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.

(Letter for Record *5*) Date of Approval of plan as for *(B.W.) Bhrs 404-8-9-10, etc.* Manufacturers of Steel *Babcock & Wilcox Ltd* Steel Co. of Scotland Ltd.
 of Boilers *3 Babcock & Wilcox Ltd* Working Pressure *200 lbs/sq in* Tested by Hydraulic Pressure to *400 lbs/sq in* Number and Description or Type
 No. of Certificate *Can each boiler be worked separately* Total Heating Surface of Boilers *9636 ft²*
 Is forced draught fitted Area of fire grate (coal) in each Boiler *85 1/2 ft²* Total grate area of boilers in vessel including
 Main and Auxiliary No. and type of burners (oil) in each boiler *none fitted* No. and description of safety valves on
 each boiler *2 Spring loaded* Area of each valve *9.62 ins²* Pressure to which they are adjusted
 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 *14' 8"* Width and Length *5' 8" x 13' 0"*
 Steam Drums:—Number in each boiler *One* Inside diameter *4' 0"* Material of plates *steel* Thickness *9/16" + 1/16"*
 Range of Tensile Strength *28/32 tons* Are drum shell plates welded or flanged *No* Description of riveting:—
 Cir. seams *DR lap* long. seams *combined* Diameter of rivet holes in long. seams *29/32"* Pitch of Rivets *3.534 ins*
 Lap of plate or width of butt straps *5 1/2" x 4"* Thickness of straps *7/16"* Percentage strength of long. joint:—Plate *74.4* Rivet *76.4*
 Diameter of tube holes in drum *3 3/32"* Pitch of tube holes *4" x 5 3/4"* Percentage strength of shell in way of tubes *82*
 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 *206 lbs/in²* Steam Drum Heads or Ends:—Material *Steel* Thickness *3/16"* Radius or how stayed *3'-6"*
 Size of Manhole *Handhole* *15" x 11"* Water Drums:—Number in each boiler *One* Inside Diameter *6' 6" square*
 Material of plates *Steel* Thickness *3/4"* Range of tensile strength *26/30 tons* Are drum shell plates welded
 or flanged *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 *3 15/16"* Pitch of tube holes *4"*
 Percentage strength of drum shell in way of tubes *43.4* Water Drum Heads or Ends:—Material *steel* Thickness *3/4"*
 Material *Steel* Thickness *14/32"* Tested by Hydraulic Pressure to *400 lbs/sq in* Material of Stays
 Area at smallest part Area supported by each stay Working Pressure by Rules Tubes:—Diameter *1 1/2" x 3 1/2"*
 Thickness *28" x 1 1/4" 192" x 262"* Number *22* inclined at *1 1/2"* Steam Dome or Collector:—Description of Joint to Shell *None fitted*
 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 *None fitted* 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 *80 1/2" 120 1/2"* Gaskets or joints:—Manhole *12* Handhole *1150* Handhole plates *24*

The foregoing is a correct description,
 (sgd) *Babcock & Wilcox Ltd* Manufacturer.

Dates of Survey } During progress of *1918 Apr 10, May 15, 22, 30, Jul 5, Aug 26, Sept 12, Oct 11 (1919)* Is the approved plan of boiler forwarded herewith *ADY 9, 10, etc.*
 while } During erection on } *Sept 30, Oct 26, 31 (1920), Sept 13 (1921), Apr 1, 9, 15, 25, May 18, Jul 6, 8, Dec 15*
 building } board vessel }
 Total No. of visits *21*

GENERAL REMARKS

(State quality of workmanship, opinions as to class, &c.)

These boilers (for standard "X" class vessels) have been built under Special Survey. They are duplicates of others previously built. The materials and workmanship are good. The headers and mud drums have been tested to 450 lbs/sq in. The built sections of the steam drums to 400 lbs/sq in hydraulic pressure. The boilers are at present loosely erected in the shops at Renfrew but it is not known yet to what vessel they will be fitted. When finally erected on board the boilers require to be hydraulically tested in complete units.

Survey Fee ... £ ... When applied for, 191
 Travelling Expenses (if any) £ *236-0-0* Monthly at 191

Committee's Minute

Assigned

(sgd) *J. L. Boyle*
 Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 4 APR 1930

FRI. 4 JUL 1930

TUE. 8 JUL 1930

Lloyd's Register
 Foundation