

REPORT ON BOILERS.

No. 86252

27 SEP 1930

Received at London Office

Date of Report *26/9/30* When handed in at Local Office *Newcastle-on-Tyne* Port of *Newcastle-on-Tyne*

No. in Survey held at Reg. Book. *40881* on the *Steel. Sc. Jo. TAYLOR.* Date, First Survey *4 Feb/29* Last Survey *25 Sept. 1930*

Master *Willington Quay.* By whom built *Sir W.G. Armstrong Whitworth & Co. Ltd. No. 1055.* When built *1930.*

Engines made at *Scotwood* By whom made *Sir W.G. Armstrong Whitworth & Co. (Eng'g) Ltd. Engine No. 83.* When made *1930.*

Boilers made at *Scotwood* By whom made *Sir W.G. Armstrong Whitworth & Co. (Eng'g) Ltd. Boiler No. 83.* When made *1930.*

Nominal Horse Power *419.* Owners *Steel. Sc. Jo. TAYLOR.* Port belonging to *Steel. Sc. Jo. TAYLOR.*

(Number of Visits) Gross Tons *4640* Net Tons *2784*

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY.~~

Manufacturers of Steel *David Colvill & Sons Glasgow (Plate) J. Thompson Ltd Wolverhampton (Furnaces)* Letter for Record *S.*

Total Heating Surface of Boilers *6870 sq ft.* Is forced draught fitted *No.* Coal or Oil fired *Coal.*

No. and Description of Boilers *3. S.E. Multitubular* Working Pressure *180 lb/0"*

Tested by hydraulic pressure to *320* Date of test *27/11/29, 17.6.29, 24/12/29, 6.7.29* No. of Certificate *409. 360 P, 409. 362 C, 412. 367 S* Can each boiler be worked separately *Yes.*

Area of Firegrate in each Boiler *64 sq ft.* No. and Description of safety valves to each boiler *2 Spring Loaded*

Area of each set of valves per boiler *per Rule 14.7 sq ins. as fitted 16.58 sq ins.* Pressure to which they are adjusted *180 lb/0"* Are they fitted with easing gear *Yes.*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *2'-4"* Is oil fuel carried in the double bottom under boilers *No.*

Smallest distance between shell of boiler and tank top plating *2'-0"* Is the bottom of the boiler insulated *No.*

Largest internal dia. of boilers *15'-0 1/2"* Length *11'-0"* Shell plates: Material *Steel* Tensile strength *28-32 tons.*

Thickness *1 1/4"* Are the shell plates welded or flanged *neither* Description of ricting: circ. seams *3-85"* end *✓* inter. *✓*

long. seams *T.R. D. Butt Straps* Diameter of rict holes in *circ. seams 1 5/16"* Pitch of rictets *9"* long. seams *1 5/16"*

Percentage of strength of circ. end seams *plate 66.4% rivets 45.9%* Percentage of strength of circ. intermediate seam *plate 85.4% rivets 92%* combined *89.6%* Working pressure of shell by Rules *181 lb/0"*

Percentage of strength of longitudinal joint *plate 85.4% rivets 92%* combined *89.6%*

Thickness of butt straps *3 1/2"* inner *1 3/32"* No. and Description of Furnaces in each Boiler *3. Deighton Section 30x*

Material *Steel* Tensile strength *26-30 tons* Smallest outside diameter *3'-8 3/4"*

Length of plain part *top ✓ bottom ✓* Thickness of plates *crown 9/16"* Description of longitudinal joint *weld* bottom *✓*

Dimensions of stiffening rings on furnace or c.c. bottom *none.* Working pressure of furnace by Rules *182 lb/0"*

End plates in steam space: Material *Steel* Tensile strength *26-30 tons* Thickness *1 1/4"* Pitch of stays *20x20 1/2"*

How are stays secured *Nuts & washers inside & outside.* Working pressure by Rules *183 lb/0"*

Tube plates: Material *front Steel back Steel* Tensile strength *26-30 tons* Thickness *1 1/2"* front *197 lb/0"* back *196 lb/0"*

Mean pitch of stay tubes in nests *11"* Pitch across wide water spaces *14 1/4"* Working pressure *front 197 lb/0" back 196 lb/0"*

Girders to combustion chamber tops: Material *Steel* Tensile strength *28-32 tons* Depth and thickness of girder *28-32 tons*

at centre *8 1/2" x 1 1/2"* Length as per Rule *33.5"* Distance apart *9 1/4"* No. and pitch of stays *2 @ 10 1/2"*

Working pressure by Rules *180 lb/0"* Combustion chamber plates: Material *Steel*

Tensile strength *26-30 tons* Thickness: Sides *2 3/32"* Back *2 1/32"* Top *2 3/32"* Bottom *7/8"*

Pitch of stays to ditto: Sides *9" x 10 1/2"* Back *8 3/4" x 8 1/2"* Top *10 1/2" x 9 1/4"* Are stays fitted with nuts or ricted over *nutted.*

Working pressure by Rules *185 lb/0"* Front plate at bottom: Material *Steel* Tensile strength *26-30 tons*

Thickness *1 1/2"* Lower back plate: Material *Steel* Tensile strength *26-30 tons* Thickness *2 3/32"*

Pitch of stays at wide water space *14 3/4" x 8 3/4"* Are stays fitted with nuts or ricted over *nutted*

Working Pressure *212 lb/0"* Main stays: Material *Steel* Tensile strength *28-32 tons*

Diameter *At body of stay, or Over threads 3 1/4"* No. of threads per inch *6.* Area supported by each stay *410 sq ins.*

Working pressure by Rules *195 lb/0"* Screw stays: Material *Steel* Tensile strength *26-30 tons*

Diameter *At turned off part, or Over threads 1 3/4"* No. of threads per inch *9.* Area supported by each stay *97.125 sq ins.*

Working pressure by Rules 185 lb/sq in Are the stays drilled at the outer ends No. Margin stays: Diameter 1 1/8"
 No. of threads per inch 9. Area supported by each stay 103 sq ins. Working pressure by Rules 206 lb/sq in.
 Tubes: Material Iron. External diameter 3 1/4" Thickness 9 wgs. No. of threads per inch 9.
 Pitch of tubes 4 1/2" Working pressure by Rules Stay 205 lb/sq in - plain 180 lb/sq in Manhole compensation: Size of opening in
 shell plate 20" x 16" Section of compensating ring 33" x 37" x 1 1/4" No. of rivets and diameter of rivet holes 40 @ 1 7/16"
 Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 3 3/8" Steam Dome: Material None.
 Tensile strength 220 Thickness of shell 2 1/4" Description of longitudinal joint
 Diameter of rivet holes 1 1/8" Pitch of rivets 2 1/2" Percentage of strength of joint 80%
 Internal diameter 28" Working pressure by Rules 185 lb/sq in Thickness of crown 1 1/4" No. and diameter of
 stays 103 Inner radius of crown 16" Working pressure by Rules 185 lb/sq in
 How connected to shell None Size of doubling plate under dome None Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell None

Type of Superheater None Manufacturers of None
 Number of elements None Material of tubes None Internal diameter and thickness of tubes None
 Material of headers None Tensile strength None Thickness None Can the superheater be shut off and
 the boiler be worked separately None Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Area of each safety valve None Are the safety valves fitted with easing gear None Working pressure as per
 Rules None Pressure to which the safety valves are adjusted None Hydraulic test pressure:
 tubes None and after assembly in place None Are drain cocks or valves fitted
 to free the superheater from water where necessary None

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes
 The foregoing is a correct description,
 I. R. T. J. W. J. Manufacturer.

Dates of Survey See report Are the approved plans of boiler and superheater forwarded herewith Yes.
 while building See report (If not state date of approval.)
 Total No. of visits 1

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built
under special survey. The material & workmanship are sound and good.
The boilers were hydraulically tested as per Rules & found satisfactory. The
safety valves were adjusted under steam to the approved working
pressure.

[Faint handwritten notes and markings, including dates like 185 lb/sq in, 206 lb/sq in, and various measurements.]

Survey Fee See report When applied for, 192
 Travelling Expenses (if any) See report When received, 192

L. Pickett.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 10 OCT 1930
 Assigned See report

