

# REPORT ON BOILERS.

13 MAR 1930

Received at London Office

Date of writing Report 28<sup>th</sup> February 1930 When handed in at Local Office 12<sup>th</sup> MARCH 1930 Port of Greenock

No. in Survey held at Greenock Date, First Survey 11<sup>th</sup> February 1929 Last Survey 11<sup>th</sup> MARCH 1930

on the S/S Charterhurst (Number of Visits ✓) (Gross        Tons) (Net       )

Master        Built at Irvine By whom built Argohe Dockyard Yard No. 515 When built 1929-30

Engines made at Greenock By whom made Rankin & Blackmore Ltd Engine No. 435 When made 1929-30

Boilers made at — " — By whom made — " — Boiler No. 435 When made 1929-30

Nominal Horse Power 470 Owners Charter Shipping Co Port belonging to Cardiff

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Wilkowitz Bergbau und Eisenhütten-Gesellschaft (Letter for Record S)

Total Heating Surface of Boilers 1495 sq ft Is forced draught fitted no Coal or oil fired coal

No. and Description of Boilers One single ended Working Pressure 200 lbs

Tested by hydraulic pressure to 350 lbs Date of test 26-9-29 No. of Certificate 1891 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 52.5 sq ft No. and Description of safety valves to each boiler one double backburns improved high lift

Area of each set of valves per boiler (per Rule 4.350) (as fitted 6.280) Pressure to which they are adjusted 205 lbs Are they fitted with easing gear yes

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 2'-0" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 2'-3" Is the bottom of the boiler insulated no

Largest internal dia. of boilers 13'-4<sup>35</sup>/<sub>32</sub>" Length 10'-6" Shell plates: Material S Tensile strength 28-32

Thickness 1<sup>1</sup>/<sub>32</sub>" Are the shell plates welded or flanged no Description of riveting: circ. seams (end Double) (inter. ✓)

long. seams J + D.B.S. Diameter of rivet holes in (circ. seams 5<sup>1</sup>/<sub>16</sub>") (long. seams 1<sup>1</sup>/<sub>4</sub>") Pitch of rivets ( 3.9") (8<sup>1</sup>/<sub>16</sub>")

Percentage of strength of circ. end seams (plate 66.4) (rivets 46.8) Percentage of strength of circ. intermediate seam (plate ✓) (rivets ✓)

Percentage of strength of longitudinal joint (plate 86.01) (rivets 86.74) (combined 89.38) Working pressure of shell by Rules 202 lbs

Thickness of butt straps (outer 1") (inner 1<sup>1</sup>/<sub>8"</sub>) No. and Description of Furnaces in each Boiler Three Deighton type 3cf.

Material S Tensile strength 26-30 Smallest outside diameter 3'-4<sup>1</sup>/<sub>8"</sub>

Length of plain part (top ✓) (bottom ✓) Thickness of plates (crown 9<sup>1</sup>/<sub>16"</sub>) (bottom 9<sup>1</sup>/<sub>16"</sub>) Description of longitudinal joint ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 203.4 lbs

End plates in steam space: Material S Tensile strength 26-30 Thickness 1<sup>3</sup>/<sub>8"</sub> Pitch of stays 17<sup>3</sup>/<sub>4" x 23<sup>1</sup>/<sub>4"</sub></sub>

How are stays secured nuts inside & outside Working pressure by Rules 20.7 lbs

Tube plates: Material (front S) (back S) Tensile strength ( 26-30) ( 26-30) Thickness ( 3<sup>1</sup>/<sub>32"</sub>) ( 3<sup>1</sup>/<sub>32"</sub>)

Mean pitch of stay tubes in nests 10.219 Pitch across wide water spaces 1'-1<sup>3</sup>/<sub>4"</sub> Working pressure (front 213 lbs) (back 214 lbs)

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

at centre 10<sup>1</sup>/<sub>8" x 1<sup>1</sup>/<sub>2"</sub></sub> Length as per Rule 2'-10<sup>1</sup>/<sub>32"</sub> Distance apart 10" No. and pitch of stays

in each 32 q" Working pressure by Rules 205 lbs Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 23<sup>1</sup>/<sub>32"</sub> Back 1<sup>1</sup>/<sub>16"</sub> Top 23<sup>1</sup>/<sub>32"</sub> Bottom 25<sup>1</sup>/<sub>32"</sub>

Pitch of stays to ditto: Sides 10" x 9" Back 9<sup>1</sup>/<sub>2" x 8<sup>1</sup>/<sub>2"</sub></sub> Top 10" x 9" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 203.5 lbs Front plate at bottom: Material S Tensile strength 26-30

Thickness 3<sup>1</sup>/<sub>32"</sub> Lower back plate: Material S Tensile strength 26-30 Thickness 7<sup>1</sup>/<sub>8"</sub>

Pitch of stays at wide water space 1'-1<sup>3</sup>/<sub>4" x 8<sup>1</sup>/<sub>2"</sub></sub> Are stays fitted with nuts or riveted over nuts

Working Pressure 205.8 lbs Main stays: Material S Tensile strength 28-32

Diameter (At body of stay, 3<sup>1</sup>/<sub>8" x 3<sup>3</sup>/<sub>8"</sub></sub>) (Over threads 3<sup>1</sup>/<sub>8"</sub>) No. of threads per inch 6 Area supported by each stay 3550"

Working pressure by Rules 208 lbs Screw stays: Material S Tensile strength 26-30

Diameter (At turned off part, 1<sup>3</sup>/<sub>4"</sub>) (Over threads 1<sup>3</sup>/<sub>4"</sub>) No. of threads per inch 9 Area supported by each stay 80<sup>3</sup>/<sub>40"</sub>



