

# REPORT ON BOILERS.

No. 82426.

Received at London Office

When handed in at Local Office - 6 JUL 1921 Port of *Liverpool*  
 Date, First Survey *June 1<sup>st</sup> 1921* Last Survey *July 1<sup>st</sup> 1921*  
 (Number of Visits *9*)  
 Tons } Gross *3922*  
 Net *2406*  
 Survey held at *Liverpool*  
 of Book *2516* on the *"Hesperia" ex "Patria"*  
 Built at *Hensburg* By whom built *Hensburger Schiffbau-Gesellschaft* When built *1919*  
 By whom made *Hensburger Schiffbau-Gesellschaft* When made *1919*  
 By whom made *Hensburger Schiffbau-Gesellschaft* When made *1919*  
 Owners *British & South American Steam Navigation Co. Ltd. (R. P. Cameron & Co. Mgrs.)* Port belonging to *Liverpool*  
 Registered Horse Power *399*

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel

Number for record *5* ) Total Heating Surface of Boilers *7537 sq. ft.* Is forced draft fitted *Yes* No. and Description of Boilers *3 - Cylindrical Multitubular* Working Pressure *185 lbs* heated by hydraulic pressure to Date of test  
 of Certificate Can each boiler be worked separately *Yes* Area of fire grate in each boiler *55 sq. ft.* No. and Description of safety valves to each boiler *2 - Spring loaded* Area of each valve *11.79 sq. in.* Pressure to which they are adjusted *190 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 *5'6"* Inside Mean dia. of boilers *14'8 5/8"* Length *12'1 3/8"*  
 Material of shell plates *Steel* Thickness *1 9/16"* Range of tensile strength *29.2 tons per sq. in.* the shell plates welded or flanged *No.*  
 description of riveting: cir. seams *DR - Lap.* long. seams *QR - Double Strap* Diameter of rivet holes in long. seams *1 3/16"* Pitch of rivets *1 5/16"*  
 of plates or width of butt straps *27%* Per centages of strength of longitudinal joint rivets *103* Working pressure of shell by plate *92.5*  
 Size of manhole in shell *16 1/2" x 12 3/4"* Size of compensating ring *8 1/2" x 1 1/4"* No. and Description of Furnaces in each boiler *3 - Corrugated* Material *Steel* Outside diameter *3'8 3/4"* Length, of plain part top *32 1/2"* Thickness of plates crown *3/4"* bottom *3/4"*  
 description of longitudinal joint *Weld* No. of strengthening rings *1* Working pressure of furnace by the rules *Approved* Combustion chamber  
 Material *Steel* Thickness: Sides *3/32"* Back *5/8"* Top *2 1/32"* Bottom *1/4"* Pitch of stays to ditto: Sides *7 3/8" x 7 3/8"* Back *7 3/8" x 7 3/8"*  
 If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *219 lbs* Material of stays *Steel* Area at smallest part *1.58 sq. in.* Area supported by each stay *60 sq. in.* Working pressure by rules *193 lbs* End plates in steam space: Material *Steel* Thickness *1 1/4"*  
 How are stays secured *Double nuts & washers* Working pressure by rules *236 lbs* Material of stays *Steel* Area at smallest part *6.23 sq. in.*  
 Area supported by each stay *22.4 sq. in.* Working pressure by rules *224 lbs* Material of Front plates at bottom *Steel* Thickness *3/4"* Material of lower back plate *Steel* Thickness *7/8"* Greatest pitch of stays *1 1/2" x 7 3/8"* Working pressure of plate by rules *190 lbs* Diameter of tubes *3 1/4" int.*  
 Material of tube plates *Steel* Thickness: Front *3/16"* Back *1/8"* Mean pitch of stays *9 3/4" x 8 3/4"* Pitch across wide  
 Working pressures by rules *198 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of  
 Length as per rule *33"* Distance apart *7 3/8"* Number and pitch of Stays in each *3 - 7 3/8"*  
 Working pressure by rules *224 lbs* Steam dome: description of joint to shell *None* % of strength of joint *✓*  
 Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet holes *✓*  
 Working pressure of shell by rules *✓* Crown plates *✓* Thickness *✓* How stayed *✓*

SUPERHEATER. Type *Schmidt's* Date of Approval of Plan *✓* Tested by Hydraulic Pressure to *✓*  
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *Yes*  
 Pressure to which each is adjusted *195 lbs* Is Easing Gear fitted *Yes*

The foregoing is a correct description, Manufacturer.

Dates of Survey *June 1, 7, 10, 14, 15, 20, 24, 29, July 1.* Is the approved plan of boiler forwarded herewith *Yes*  
 Total No. of visits *9*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The Boilers of this vessel have been examined throughout and put in good condition. The workmanship is good and they are securely fitted. The scantlings have been verified and found in accordance with the approved plan. In my opinion, they are eligible to be classed with record in the Register Book of BS 7.21*

Survey Fee ... £ : : } When applied for, *R.P. 9* 19...  
 Travelling Expenses (if any) £ : : } When received, 19...

Committee's Minute *LIVERPOOL, 15 JUL 1921*  
 Assigned *See report attached.* *B. G. Deford*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 FRI. 29 SEP. 1922  
 FRI. 10 FEB. 1922  
 TUE. 24 APR. 1923

