

# REPORT ON BOILERS.

No. 63005

MON. SEP. 23. 1912

Received at London Office  
 Date of writing Report *5th Sept 1912* When handed in at Local Office *5th Sept 1912* Port of *Newcastle on Tyne*  
 Date, First Survey *8th Mar. 1912* Last Survey *12th Sept 1912*  
 No. in Survey held at *S Shields*  
 Reg. Book. *652* on the *S S Thyra Menier*  
 Master *Blyth* Built at *Blyth* By whom built *S B Cato* When built *1912*  
 Engines made at *S Shields* By whom made *G J Grey* When made *1912*  
 Boilers made at *S Shields* By whom made *J S Eltringham & Co* When made *1912*  
 Registered Horse Power *Donald S S Cato* Port belonging to *Bristol*

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel *J Spener & Sons Ltd*

(Letter for record *S*) Total Heating Surface of Boilers *2450 sq ft* Is forced draft fitted  
 Boilers *No, Single Ended* Working Pressure *180 lb* Tested by hydraulic pressure to *360 lb* Date of test *13/8/12*  
 No. of Certificate *8361* Can each boiler be worked separately  Area of fire grate in each boiler  
 safety valves to each boiler Area of each valve 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 *Inside* Mean dia. of boilers *11-10 1/16"* Length *10-0"*  
 Material of shell plates *Steel* Thickness *3 1/32"* Range of tensile strength *29/30 tons* Are the shell plates welded or flanged *No*  
 Descrip. of riveting: cir. seams *2 R Lap* long. seams *S R Butt* Diameter of rivet holes in long. seams *1"* Pitch of rivets *6 7/8"*  
 Top of plates width of butt straps *14 3/4"* Per centages of strength of longitudinal joint rivets *87.5* Working pressure of shell by plate *85.4*  
 rules *184 lb* Size of manhole in shell *16" x 12"* Size of compensating ring *30 x 26 3/32"* No. and Description of Furnaces in each boiler  
 boiler *No, Doughton* Material *Steel* Outside diameter *43 1/2"* Length of plain part *11' 7 1/2"* Thickness of plates crown *1 7/32"* bottom *1 7/32"*  
 Description of longitudinal joint *Welded* No. of strengthening rings  Working pressure of furnace by the rules *188* Combustion chamber  
 plates: Material *Steel* Thickness: Sides *2 1/32"* Back *1 1/16"* Top *2 1/32"* Bottom *1 3/16"* Pitch of stays to ditto: Sides *9 x 9"* Back *9 1/2 x 9 1/2"*  
 Top *9 1/2 x 8 1/2"* stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *183* Material of stays *Steel* Diameter at smallest part *1 3/8"* Area supported by each stay *111 sq in* Working pressure by rules *186* End plates in steam space: Material *Steel* Thickness *1 1/32"*  
 Pitch of stays *7 x 15 1/4"* How are stays secured *Nuts* Working pressure by rules *187* Material of stay *Steel* Diameter at smallest part *1 5/16"*  
 Area supported by each stay *260 sq in* Working pressure by rules *183* Material of Front plates at bottom *Steel* Thickness *1 1/32"* Material of  
 Lower back plate *Steel* Thickness *2 7/32"* Greatest pitch of stays *14 1/2 x 9 1/4"* Working pressure of plate by rules *190* Diameter of tubes *3 1/4"*  
 Pitch of tubes *4 1/2"* Material of tube plates *Steel* Thickness: Front *1 1/32"* Back *2 7/32"* Mean pitch of stays *11 1/4"* Pitch across wide  
 water spaces *14 1/4"* Working pressures by rules *187 lb* Girders to Chamber tops: Material *Steel* Depth and thickness of  
 girder at centre *9 1/2 x 1 7/8"* Length as per rule *30 1/2"* Distance apart *8 1/2"* Number and pitch of Stays in each *No, 9 1/2"*  
 Working pressure by rules *185 lb* Superheater or Steam chest: how connected to boiler *None* Can the superheater be shut off and the boiler worked  
 separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet  
 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

The foregoing is a correct description,  
 J. Donovan  
 Manufacturer.

Dates of Survey while building: During progress of work in shops - - - *1912 Mar. 8, Jun. 3, 6, 10, 13, 19, Jul. 9, 22, 30, Aug. 2, 13, Sep. 2* Is the approved plan of boiler forwarded herewith   
 During erection on board vessel - - - *See Machinery Report* Total No. of visits *12*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been built under special survey the materials & workmanship are of good quality and on completion were satisfactorily tested by hydraulic pressure to 360 lb per sq in & were found tight & sound at that pressure. They have been fitted on board by G. J. Grey Esq of S Shields*

Survey Fee ... *Charge to Engineer* When applied for, ... 191  
 Travelling Expenses (if any) £ : : When received, ... 191

*George Murdoch*  
 Engineer & Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute TUE. SEP. 24. 1912  
 Assigned

