

# REPORT ON BOILERS.

2 - APR 1910

Received at London Office

W.F.R. 6 APL 1910

Date of writing Report 19... When handed in at Local Office 19... Port of **NEWCASTLE ON TYNE.**

No. in Survey held at *South Shields* Date, First Survey *24<sup>th</sup> Nov. 1909* Last Survey *12<sup>th</sup> March 1910*

Reg. Book. on the *Boiler for the ste. Hopper Barge "Priestman"* (Number of Visits) Gross Tons Net

Master Built at *Middlesbrough* By whom built *Smiths Dock Co. Ltd* When built *1910*

Engines made at *North Shields* By whom made *Shields Engineering & Dry Dock Co. Ltd* When made *1910*

Boilers made at *South Shields* By whom made *J. J. Eltringham & Co. (Ld.) 1635* When made *1910*

Registered Horse Power Owners Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel *J. Spencer & Sons*

(Letter for record *S*) Total Heating Surface of Boilers *1304 sq ft* Is forced draft fitted *no* No. and Description of Boilers *One multitubular* Working Pressure *135 lbs* Tested by hydraulic pressure to *270 lbs* Date of test *27/1/10*

No. of Certificate *7930* Can each boiler be worked separately *✓* Area of fire grate in each boiler *35 sq ft* No. and Description of safety valves to each boiler *2 direct spring* Area of each valve *4.9 sq in* Pressure to which they are adjusted *140 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 *16"* Mean dia. of boilers *11'-11 1/8"* Length *10'-0"*

Material of shell plates *steel* Thickness *27/32"* Range of tensile strength *28 3/4 - 32* Are the shell plates welded or flanged *flanged*

Descrip. of riveting: cir. seams *double* long. seams *double butt* Diameter of rivet holes in long. seams *1 3/16"* Pitch of rivets *5"*

Lap of plates or width of butt straps *11 7/8"* Per centages of strength of longitudinal joint rivets *78%* Working pressure of shell by rules *136 lbs* Size of manhole in shell *12" x 16"* Size of compensating ring *7" x 27/32"* No. and Description of Furnaces in each boiler *2 plain* Material *steel* Outside diameter *44"* Length of plain part top *76"* Thickness of plates crown *2 1/32"* bottom *2 1/32"*

Description of longitudinal joint *double butt* No. of strengthening rings *✓* Working pressure of furnace by the rules *137 lbs* Combustion chamber plates: Material *steel* Thickness: Sides *19/32"* Back *19/32"* Top *19/32"* Bottom *2 1/32"* Pitch of stays to ditto: Sides *9 1/2" x 9 1/4"* Back *9 1/2" x 8 1/2"* Top *8 1/2" x 8 3/4"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *138 lbs* Material of stays *steel* Diameter at smallest part *1 1/32"* Area supported by each stay *87.8 sq in* Working pressure by rules *202 lbs* End plates in steam space: Material *steel* Thickness *7/8"*

Pitch of stays *6 3/4" x 15 3/4"* How are stays secured *nuts & washers* Working pressure by rules *137 lbs* Material of stays *steel* Diameter at smallest part *2 3/16"*

Area supported by each stay *264 sq in* Working pressure by rules *148 lbs* Material of Front plates at bottom *steel* Thickness *29/32"* Material of Lower back plate *steel* Thickness *25/32"* Greatest pitch of stays *14 1/2" x 9 1/4"* Working pressure of plate by rules *140 lbs* Diameter of tubes *3 1/2"*

Pitch of tubes *4 3/4" x 4 7/16"* Material of tube plates *steel* Thickness: Front *29/32"* Back *3/4"* Mean pitch of stays *11 3/16"* Pitch across wide water spaces *14 1/2"* Working pressures by rules *140 lbs* Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *6 1/2" x 15 7/8"* Length as per rule *29 1/2"* Distance apart *8 3/4"* Number and pitch of Stays in each tier *8 1/2"*

Working pressure by rules *138 lbs* Superheater or Steam chest; how connected to boiler *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. J. Eltringham & Co* Manufacturer.

Dates of Survey while building: During progress of work in shops - - 1909 Nov. 24, 29, Dec. 3, 7, 9, 15, 21, 1910 Jan. 5, 12, 22, 24, 27. Is the approved plan of boiler forwarded herewith *Yes*

while building: During erection on board vessel - - - See Machinery report Total No. of visits *12*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under special survey, the materials used are good and the workmanship is satisfactory.*

Survey Fee ... £ *see Machinery report* When applied for, 19...  
 Travelling Expenses (if any) £ : When received, 19...

*Charles Cooper*  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **FRI. 22 APL 1910**

Assigned

