

# REPORT ON BOILERS.

No. 7464

WED. NOV. 11. 1914

Received at London Office

Date of writing Report *7<sup>th</sup> Nov 1914* Wherewithal in at Local Office *7<sup>th</sup> Nov 1914* Port of *Belfast*  
 No. in Survey held at *Belfast* Date, First Survey *1<sup>st</sup> Oct 1913* Last Survey *5<sup>th</sup> Nov 1914*  
 on the *S.S. Essequibo* (Number of Visits *99*) Tons { Gross *8464*  
 Net *5178*  
 Built at *Belfast* By whom built *Workman Clark & Co. Ltd* When built *1914*  
 Engines made at *Belfast* By whom made *-* when made *-*  
 Boilers made at *-* By whom made *-* when made *-*  
 Registered Horse Power *-* Owners *Royal Mail S. P. Coy* Port belonging to *Belfast*

**MULTITUBULAR BOILERS** - MAIN, AUXILIARY OR DONKEY - Manufacturers of Steel *Beardmore & Co*  
 Letter for record *S* Total Heating Surface of Boilers *5772 sq ft* Is forced draft fitted *Yes* No. and Description of Boilers *2 Single End Cylindrical* Working Pressure *215 lbs* Tested by hydraulic pressure to *430 lbs* Date of test *26-6-14*  
 No. of Certificate *463* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *7 1/2 sq ft* No. and Description of Safety valves to each boiler *2 - Direct Spring* Area of each valve *11.04 sq in* Pressure to which they are adjusted *215 lbs*  
 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 *About 15"* Mean dia. of boilers *16'-0"* Length *11'-9"*  
 Material of shell plates *Steel* Thickness *1/8"* Range of tensile strength *30 1/2 to 33 1/2 Tons* Are the shell plates welded or flanged *No*  
 Description of riveting: cir. seams *Lap B & T, long. seams* Butt *Double* Diameter of rivet holes in long. seams *1/8"* Pitch of rivets *10 1/2"*  
 Pitch of plates or width of butt straps *23 1/2"* Per centages of strength of longitudinal joint rivets *90.5* Working pressure of shell by plate *84.5*  
 Size of manhole in shell *16" x 12"* Size of compensating ring *No* No. and Description of Furnaces in each boiler *4 Morrison* Material *Steel* Outside diameter *44 1/2"* Length of plain part top *4"* Thickness of plates crown *3/16"* bottom *3/64"*  
 Description of longitudinal joint *Weld* No. of strengthening rings *0* Working pressure of furnace by the rule *248 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *3/32"* Back *3/32"* Top *3/32"* Bottom *3/32"* Pitch of stays to ditto: Sides *8 1/2" x 7 1/2"* Back *Various*  
 If stays are fitted with nuts or riveted heads *Nuts inside* Working pressure by rules *219 lbs* Material of stays *Steel* Diameter at smallest part *2.06 to 2.6"* Area supported by each stay *63.9 sq in* Working pressure by rule *271 lbs* plates in steam space: Material *Steel* Thickness *1/16"*  
 How are stays secured *Nuts & Washers* Working pressure by rule *216 lbs* Material of stays *Steel* Diameter at smallest part *1.99 to 2.3"*  
 Area supported by each stay *30.5 sq in* Working pressure by rules *246 lbs* Material of Front plates at bottom *Steel* Thickness *1"* Material of lower back plate *Steel* Thickness *3/32"* Greatest pitch of stays *4 1/2" x 9 1/2"* Working pressure of plate by rules *227 lbs* Diameter of tubes *2 1/2"*  
 Pitch of tubes *3 3/8" x 3 5/8"* Material of tube plates *Steel* Thickness: Front *1/64"* Back *1/16"* Mean pitch of stays *7 1/2" x 7 1/2"* Pitch across wide water spaces *13 1/2"* Working pressures by rules *219 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *10" x (3/4" x 2)* Length as per rule *33"* Distance apart *8 1/2"* Number and pitch of Stays in each *3 - 7 1/2"*  
 Working pressure by rules *224 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

  

Pitch of rivets	Working pressure of shell by rules	Diameter of flue	Material of flue plates	Thickness

  

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,  
 FOR WORKMAN, CLARK & CO., LIMITED.  
*M.H. Bell* Manufacturer.

Dates of Survey *See other sheet*  
 During progress of work in shops - - -  
 while building *See other sheet*  
 During erection on board vessel - - -

Is the approved plan of boiler forwarded herewith *Yes*  
 Total No. of visits *Returned 12/11/14*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *See other sheet*

Survey Fee ... £ *See other sheet* When applied for ... 19  
 Travelling Expenses (if any) £ : : When received, ... 19

*R. J. Beveridge*  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute *FRI. NOV. 20. 1914*  
 Assigned



## List of Donkey Pumps

2 New Main Feed	14" x 10 1/2" x 26"
General	11" x 7 1/2" x 17"
Ash Ejector	11" x 7 1/2" x 12"
Aux. Air	8" x 12" x 17"
Aux. Feed	8" x 5" x 15"
Sanitary	6" x 7" x 8"
Fresh Water	5" x 5" x 8"
Ballast	8" x 10" x 10"

## Spare Gear

- 2 Propeller Blades
  - 1 Thomson Breakdown Coupling
  - 1 Piston rod complete
  - 1 Head eccentric rod, pulley and strap, complete
  - 2 Valve spindles
  - 1 Pair crank pin bushes
  - 2 - top end -
  - 2 - main bearing -
  - 2 Sets H.P. piston rings
  - 1 - H.P. M.P. M.P. 2 -
  - 1 - piston valve packing rings
  - 1 - blocks, rings & springs for H.P. & M.P. piston rods and valve spindle metallic packings
  - 1 - blocks and springs for M.P. 2 & L.P. piston rod metallic packings
  - 1 Air pump bucket rod & head valve seat
  - 50 Main Condenser tubes
  - 4 Safety valve springs
  - 1 Centrif. pump impeller & spindle
  - 12 Barlex tubes
  - 2 Eccentric strap bolts & nuts
- Set fire bars, junk ring & other bolts etc.  
and all gear to Lloyd's Rules extra.

R. F. Beveridge



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Foundation