

# REPORT ON MACHINERY.

No. 7464

WED. NOV. 11. 1914

of writing Report *7<sup>th</sup> Nov 10/14* When handed in at Local Office *10/14* Port of *Belfast*  
 in Survey held at *Belfast* Date, First Survey *1<sup>st</sup> Oct 1913* Last Survey *5<sup>th</sup> Nov 1914*  
 Book. on the *T.S.S. Essequibo* (Number of Vols. *99*) Gross *8464*  
 Tons Net *6178*  
 When built *1914*

ster Built at *Belfast* By whom built *Markman Clark & Co. Ltd*  
 Lines made at *Belfast* By whom made *-* when made *-*  
 lers made at *-* By whom made *-* when made *-*

Registered Horse Power *1055* Owners *Royal Mail S. P. Coy* Port belonging to *Belfast*  
 n. Horse Power as per Section 28 *7067* Is Refrigerating Machinery fitted for cargo purposes *Yes* Is Electric Light fitted *Yes*

GINES, &c.—Description of Engines *Twin Screw Quadruple Expansion* of Cylinders *8* No. of Cranks *8*  
 . of Cylinders *22-31½-45½-65* Length of Stroke *45* Revs. per minute *90* Dia. of Screw shaft *as per rule 13¼* Material of *Steel*  
*as fitted 14¼* screw shaft

the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes* Is the after end of the liner made water tight  
 the propeller boss *Yes* If the liner is in more than one length are the joints burned *✓* If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *✓* If two

rs are fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *4'-9"*  
 . of Tunnel shaft *as per rule 11.9* Dia. of Crank shaft journals *as per rule 12.5* Dia. of Crank pin *13¼* Size of Crank web *24½ x 9* Dia. of thrust shaft under  
*as fitted 12.625* *as fitted 13.25*

lars *13¼* Dia. of screw *16'-6"* Pitch of Screw *17'-9"* No. of Blades *3* State whether moveable *Yes* Total surface *78 sq ft*  
 . of Feed pumps *None* Diameter of Main Engines *Can one be overhauled while the other is at work* *✓*  
 . of Bilge pumps *one* Diameter of ditto *5½* Stroke *24* *Can one be overhauled while the other is at work* *Yes* *✓*

. of Donkey Engines *See other sheet* No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room *6-3½* In Holds, &c. *10-3½, 6-3, 3-2½*

. of Bilge Injections *2* sizes *9"* Connected to condenser, or to circulating pump *Pumps* Is a separate Donkey Suction fitted in Engine room & size *Yes* *2½"*  
 re all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *✓*

re all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Both* *✓*  
 re they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *Yes* Are the Discharge Pipes above or below the deep water line *Below* *✓*  
 re they each fitted with a Discharge Valve always accessible on the plating of the vessel *Yes* Are the Blow Off Cocks fitted with a spigot and brass covering plate *Yes* *✓*

hat pipes are carried through the bunkers *Fore hold suction* How are they protected *Wood casings* *✓*  
 re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes* *✓*  
 re the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *Yes* *✓*

ates of examination of completion of fitting of Sea Connections *-7-14* of Stern Tube *-7-14* Screw shaft and Propeller *3-7-14*  
 the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from *Upper Deck* *✓*

ILERS, &c.—(Letter for record *5*) Manufacturers of Steel *Beardmore & Co. Ltd*  
*2DB 11018 9/- 2SB 5772 4/- = Total 16790 1/-*  
 otal Heating Surface of Boilers *1194 sq ft* Forced Draft fitted *Yes* No. and Description of Boilers *2 Double End Cylinders* *✓*

orking Pressure *215 lbs* Tested by hydraulic pressure to *430 lbs* Date of test *26-6-14* No. of Certificate *463*  
 an each boiler be worked separately *Yes* Area of fire grate in each boiler *143 sq ft* No. and Description of Safety Valves to  
 ch boiler *3 Direct Spring* Area of each valve *14'19 sq* Pressure to which they are adjusted *215 lbs* Are they fitted with easing gear *Yes* *✓*

allest distance between boilers or uptakes and bunkers or woodwork *Plant* Mean dia. of boilers *16'-0"* Length *20'-0"* Material of shell plates *Steel* *✓*  
 thickness *1½"* Range of tensile strength *30½-33½ Tons* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. sec. *Lap Dr. S.*  
 ng. seams *Butt* Diameter of rivet holes in long. seams *1½"* Pitch of rivets *10½"* Lap of plates or width of butt straps *23½"*

er centages of strength of longitudinal joint rivets *90.5* Working pressure of shell by rules *253 lbs* Size of manhole in shell *16" x 12"*  
 plate *84.5* Working pressure of shell by rules *253 lbs* Size of manhole in shell *16" x 12"*  
 size of compensating ring *McNeill* No. and Description of Furnaces in each boiler *8-Murison* Material *Steel* Outside diameter *44½"*

length of plain part top *4"* bottom *8"* Thickness of plates crown *3 43/64* bottom *3 43/64* Description of longitudinal joint *Weld* No. of strengthening rings *✓*  
 Working pressure of furnace by the rules *248 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *43/64* Back *✓* Top *43/64* Bottom *29/32*

itch of stays to ditto: Sides *7½ x 7½* Back *✓* Top *8 x 8* If stays are fitted with nuts or riveted heads *Nuts inside* Working pressure by rules *226 lbs*  
 Material of stay *Steel* Diameter at smallest part *2.06* Area supported by each stay *68 sq* Working pressure by rules *273 lbs* End plates in steam space:

Material *Steel* Thickness *1¼"* Pitch of stays *74 x 15½* How are stays secured *Butts & Washers* Working pressure by rules *216 lbs* Material of stays *Steel* *✓*  
 area at smallest part *7.23 sq* Area supported by each stay *305 sq* Working pressure by rules *246 lbs* Material of Front plates at bottom *Steel* *✓*

Thickness *1"* Material of Lower back plate *✓* Thickness *✓* Greatest pitch of stays *✓* Working pressure of plate by rules *✓*  
 Diameter of tubes *2½"* Pitch of tubes *3½ x 3½* Material of tube plates *Steel* Thickness: Front *1¼"* Back *1¼"* Mean pitch of stays *7½ x 7½*

itch across wide water spaces *13½"* Working pressures by rules *219 lbs* Girders to Chamber tops: Material *Steel* Depth and  
 thickness of girder at centre *7½ (¾ x 2)* Length as per rule *49½"* Distance apart *8½"* Number and pitch of stays in each *6-6½ x 8"*

Working pressure by rules *253 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

oles *✓* Pitch of rivets *✓* Working pressure of shell by rules *✓* Diameter of flue *✓* Material of flue plates *✓* Thickness *✓*  
 f 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 *✓*



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