

Shipbuilder Craig Taylor No. 78

Engineer W. Allan B<sup>d</sup> No. 209

TENSILE RANGE Shell = 28 tons 32. tons.  
Stays = 27 tons 32. tons.  
LBS.

200 hp

|                                 |  |  |  |  |  |
|---------------------------------|--|--|--|--|--|
| % Plate.                        | $\frac{P - d}{P}$  | $= \frac{9 - 1\frac{1}{2}}{9} = 85.0\%$                                  | Back Bottom with doubling.                   | $\frac{c \times (t + \frac{t}{2})^2}{\frac{1}{2} (P^2 + P^2)}$             | $= \frac{135(12 + \frac{12}{2})^2}{\frac{1}{2}(17^2 + 9^2)} = 256$                             |
| % Rivets.                       | $\frac{a \times \text{No.} \times 1.75 \times 85}{P \times t}$ | $= \frac{1.418 \times 5 \times 1.75 \times 85}{9 \times 1.375} = 85.1\%$ | Girders.                                     | $\frac{c \times d^2 \times t}{(L - P) \times \text{dist. apart} \times L}$ | $= \frac{9400 \times 9^2 \times 1.5}{(28\frac{1}{2} - 8) \times 8 \times 28\frac{1}{2}} = 251$ |
| Shell.                          | $\frac{c(t - 2)}{D}$   | $= \frac{31 \times 28}{159.25} = 232$                                    | Plain Furnaces.                              | $\frac{50(300T - L)}{D}$   | $= \frac{50(300 - 1)}{D} = \dots$  |
| Front and Back Tops.            | $\frac{c \times t^2}{\frac{1}{2} (P^2 + P^2)}$                 | $= \frac{145 \times 14.5^2}{\frac{1}{2}(16^2 + 14.5^2)} = 222$           | Do, where thickness exceeds 120 times plate. | $\frac{1,075,200 \times T^2}{L \times D}$                                  | $= \frac{1,075,200 \times 1^2}{L \times D} = \dots$  |
| Front Tube Plate.               | $\frac{c \times t^2}{P^2}$                                     | $= \frac{140 \times 12^2}{8^2} = 266$                                    | Patent.                                      | $\frac{1259(T - 2)}{D}$  | $= \frac{1259(9 - 2)}{41.75} = 211$  |
| Front Tube Plate with doubling. | $\frac{c \times (t + \frac{t}{2})^2}{P^2}$                     | $= \frac{140(12 + \frac{10}{2})^2}{13.5^2} = 222$                        | Main Stays.                                  | $\frac{c \times a}{\text{surface supported}}$                              | $= \frac{6.1 \times 9000}{16.2 \times 14.2} = 255$   |
| Back Tube Plate.                | $\frac{c \times t^2}{P^2}$                                     | $= \frac{140 \times 12^2}{8^2} = 266$                                    | 1 1/2" Screw Stays.                          | $\frac{c \times a}{\text{surface supported}}$                              | $= \frac{1.78 \times 9000}{8.2} = 251$   |
| Compress. Tube Plate.           | $\frac{c(D - d) \times t}{W \times D}$                         | $= \dots$  | 1 1/2" Screw Stays.                          | $\frac{c \times a}{\text{surface supported}}$                              | $= \dots$  |
| C. Chbr. Plate Sides.           | $\frac{c \times t^2}{\frac{1}{2} (P^2 + P^2)}$                 | $= \frac{135 \times 10^2}{8^2} = 211$                                    | Stay Tubes.                                  | $\frac{A \times c}{P^2}$   | $= \dots$  |
| C. Chbr. Plate Top.             | $\frac{c \times t^2}{\frac{1}{2} (P^2 + P^2)}$                 | $= \dots$  |  |  |  |
| C. Chbr. Plate Backs.           | $\frac{c \times t^2}{\frac{1}{2} (P^2 + P^2)}$                 | $= \dots$  |  |  |  |
| Back Bottom.                    | $\frac{c \times t^2}{\frac{1}{2} (P^2 + P^2)}$                 | $= \dots$  |  |  |  |