

MOMENT OF INERTIA CALCULATION.

12/9/04

Name of Vessel *Lunard Co. S.S.* Builder's Name and Yard No. *Lunard No 735*

RULE DIMENSIONS *76.0 x 87.5 x 40.5* CLASS

Distance of Assumed Neutral Axis above Base *30.0*

Depth of Girder *60.5 in*

Above N.A.

31.3

61.3

ITEMS.	DIMENSIONS.	AREA.	C. G. FROM NEUTRAL AXIS.	MOMENT.	MOMENT OF INERTIA.	CORRECTION $\frac{1}{12} A H^2$.
<i>Side Plt.</i>	<i>404 x 1.00</i>	<i>404</i>	<i>15.6</i>	<i>6.303</i>	<i>32980</i>	<i>31.3^2</i>
<i>Double #1</i>	<i>48 x 1.20</i>	<i>58</i>	<i>29.3</i>	<i>1.695</i>	<i>98340</i>	<i>4^2</i>
<i>" 2</i>	<i>51 x 1.15</i>	<i>59</i>	<i>25.1</i>	<i>1.480</i>	<i>49800</i>	<i>4.2^2</i>
<i>" 3</i>	<i>48 x 1.10</i>	<i>53</i>	<i>21.0</i>	<i>1.113</i>	<i>37170</i>	<i>4^2</i>
<i>" 4</i>	<i>48 x 1.00</i>	<i>48</i>	<i>16.9</i>	<i>.811</i>	<i>23370</i>	<i>4^2</i>
<i>th. sh. str. d.</i>	<i>66 x .85</i>	<i>21.2</i>	<i>31.0</i>	<i>4.573</i>	<i>13.710</i>	
<i>th. sh. str. d.</i>	<i>12 x 9 x 20/10</i>	<i>238</i>	<i>31.7</i>	<i>7.545</i>	<i>203.480</i>	
<i>th. sh. str. d.</i>	<i>45 x .90</i>	<i>297</i>	<i>20.6</i>	<i>6.118</i>	<i>171080</i>	
<i>th. sh. str. d.</i>	<i>54 x .80</i>	<i>183</i>	<i>11.5</i>	<i>2.105</i>	<i>23.9400</i>	
<i>th. sh. str. d.</i>	<i>44 x .60</i>	<i>165</i>	<i>3.5</i>	<i>.577</i>	<i>12.6020</i>	
<i>th. sh. str. d.</i>	<i>45 x .50</i>	<i>23</i>	<i>2.0</i>	<i>.46</i>	<i>24.200</i>	
<i>th. sh. str. d.</i>	<i>38 x .6</i>	<i>6</i>	<i>3.3</i>	<i>.20</i>	<i>2.020</i>	
<i>th. sh. str. d.</i>	<i>258 x .4</i>	<i>23</i>	<i>2.0</i>	<i>.46</i>	<i>.90</i>	
<i>th. sh. str. d.</i>	<i>36 x .50</i>	<i>6</i>	<i>3.3</i>	<i>.20</i>	<i>.70</i>	

1712
1746

33332
34387

818550
851150

Below.

5/6 Above.

1888

1455

3343

48337

28652

14682

1116630

1704350

1825930

y = 4.39
35.49
49350
I/y = 103360
98700

73080

1761430

51680

103360

1/2 I
1/2 I/y

B. wt. = 960000 ft tons.

Stress at gunwale = $\frac{960000}{98700} = 9.72$ tons per sq in.

Bending moment and scantlings as submitted by Lunard Hunters 8/9/04.



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