

# MOMENT OF INERTIA CALCULATION.

15/8/05.

Name of Vessel *Lunard Express* Builder's Name and Yard No. *Swan & Hunter 735*

~~RULE~~ DIMENSIONS *76.0 x 87.5 x 69.73* CLASS

Distance of Assumed Neutral Axis above Base  $\begin{array}{r} 30.00 \\ 40.73 \\ \hline 70.73 \end{array}$  Depth of Girder *70.73*

ITEMS.	DIMENSIONS.	AREA.	C. G. FROM NEUTRAL AXIS.	MOMENT.	MOMENT OF INERTIA.	CORRECTION $\frac{1}{12} A H^2$ .
Above X.	+78.3	1783		35,686	892,240	
- 1 skull. (4)	<del>56</del>	56		<del>985</del>	17,450	
	+72.7	1727.0		34,701	874,810	
Plates	54 x .65	35.0	33.70	1,179	39,750	
"	1.8 x .65	44.2	38.00	1,680	63,820	
"	45 x .65					
"	36 x .80	54.6	39.90	2,178	86,900	
"	236 x .45					
"	48 x .55	137.7	40.30	5,550	223,700	
		1998.5		45,288	1,288,980	
Below.	<del>192.1</del>	1926		43,642	1,125,950	
5/16 above.		1665		37,740	1,077,000	
		3591		15,902	2,199,950	
				1.44	9,490	
				40.73		
				42.37	2,190,260	$-\frac{1}{2} I$
					51,700	$-\frac{1}{2} I_y$
Band wt.	$1,011,400 \times \frac{36}{48} = 758,600$ lbs.				1,034,000	$I_y$
					19,000	
					4,380,000	
	<del>1,011,400</del>					
	$\frac{758,600}{1,034,000} =$					
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