











**Table 1: *dd* vectors for determining the rating boundaries of ship types**

Ship type		Capacity in CII calculation	<i>dd</i> vectors (after exponential transformation)			
			exp(d1)	exp(d2)	exp(d3)	exp(d4)
Bulk carrier		DWT	0.86	0.94	1.06	1.18
Gas carrier	65,000 DWT and above	DWT	0.81	0.91	1.12	1.44
	less than 65,000 DWT	DWT	0.85	0.95	1.06	1.25
Tanker		DWT	0.82	0.93	1.08	1.28
Container ship		DWT	0.83	0.94	1.07	1.19
General cargo ship		DWT	0.83	0.94	1.06	1.19
Refrigerated cargo carrier		DWT	0.78	0.91	1.07	1.20
Combination carrier		DWT	0.87	0.96	1.06	1.14
LNG carrier	100,000 DWT and above	DWT	0.89	0.98	1.06	1.13
	less than 100,000 DWT		0.78	0.92	1.10	1.37
Ro-ro cargo ship (vehicle carrier)		GT	0.86	0.94	1.06	1.16
Ro-ro cargo ship		DWT	0.66	0.90	1.11	1.37
Ro-ro passenger ship		GT	0.72	0.90	1.12	1.41
Cruise passenger ship		GT	0.87	0.95	1.06	1.16

By comparing the attained annual operational CII of a specific ship with the four boundaries, a rating can then be assigned. For example, given the required CII of a bulk carrier in a specific year as 10 gCO<sub>2</sub>/(dwt.nmile), then the superior boundary, lower boundary, upper boundary, and inferior boundary is 8.6, 9.4, 10.6 and 11.8 gCO<sub>2</sub>/(dwt.nmile). If the attained CII is 9 gCO<sub>2</sub>/(dwt.nmile), the ship would be rated as "B".

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