

Team RTI

Material List

Material	Surface Area [m ²]	Density [kg/m ³]
Steel	2,006	7,850
Aluminum	1,016	2,660

Representative Structural Thickness

Material	Low [cm]	Operational [cm]	High [cm]
Steel	1.90	2.07	2.23
Aluminum	3.18	3.40	3.67
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Manufactured Material Cost

Material	Low [USD/Tonne]	Typical [USD/Tonne]	High [USD/Tonne]
Steel	\$2,250	\$3,000	\$4,500
Aluminum	\$4,900	\$5,900	\$8,000
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Characteristic Capital Expenditure (CCE)

CCE = Total Surface Area (m²) x Representative Structural Thickness (m) x Density of Material (kgm⁻³) x Cost of Manufactured Material per unit Mass (\$kg⁻¹).

Material	RST [cm]	MMC [USD/Tonne]	CCE/material [\$]	TOTAL CCE [\$]
Steel	2.07	\$3,000	\$977,895	\$1,520,028
Aluminum	3.40	\$5,900	\$542,134	

Notes/Comments