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| --- | --- | --- | --- | --- | --- |
|  | | **Structural Steel** | **Aluminum Alloy** | **Epoxy E-Glass UD** | **Epoxy /Graphite** |
| **Design 1** | Mass (kg) | 4.79 | 1.69 | 1.22 | 0.977 |
| Max magnitude of max combined stress | 3.96e8Pa | 3.96e8Pa | 3.96e8Pa | 3.96e8Pa |
| Safety Factor (Tension) | 1.16 | 0.783 | 2.8 | 2.8 |
| Max magnitude of min combined stress | 5.93e6 | 5.93e6 | 5.93e6 | 5.93e6 |
| Safety factor (Compression) \* only if different from tension |  |  | 113.8 | 134.9 |
| Load multiplier | 2.48 | 0.8729 | 0.3077 | 2.60 |
| **Design 2** | Mass (kg) | 4.97 | 1.76 | 1.27 | 0.946 |
| Max magnitude of max combined stress | 1.16 | 0.783 | 2.8 | 2.8 |
| Safety Factor (Tension) | 3.96e8 | 3.96e8 | 3.96e8 | 3.96e8 |
| Max magnitude of min combined stress |  |  | 94.01 | 111 |
| Safety factor (compression) \* only if different from tension | 7.18e6 | 7.18e6 | 7.18e6 | 7.18e6 |
| Load multiplier | 2.53 | 0.891 | 0.307 | 2.62 |