Design Proposal

**Mercedes S/AL10**

Volume: 50,000/yr.

Selected BIW Materials:

- Aluminum Roof
- Aluminum Inner
- SMC Outer
- Aluminum Floor
Mercedes-Benz Strategy

• M-B manufactures world class luxury vehicles

• M-B is a recognized industry leader
  • customer satisfaction
  • manufacturing technology
  • environmental strategy

• The S Class is the technology flagship of the M-B brand

BIW Mass vs. BIW Cost

![BIW Mass vs. BIW Cost graph]

S/AL10
Production Sensitivities of Top Design Alternatives

Final Design Details

<table>
<thead>
<tr>
<th>Final Design</th>
<th>Relative to Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIW Weight: 317 lbs</td>
<td>- 291 lbs</td>
</tr>
<tr>
<td>Total Vehicle Weight: 2,819 lbs</td>
<td>- 291 lbs</td>
</tr>
<tr>
<td>BIW Cost: $2,644</td>
<td>+ $563</td>
</tr>
<tr>
<td>MPG: 22.6</td>
<td>+ 1.0</td>
</tr>
</tbody>
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Long Term Savings in Gas Expenses

Production Volume and Al Price Sensitivities
Landfill Costs

Design Conclusion

Benefits of the S/AL10 design:

- M-B maintains technological edge
- Increased fuel economy
- Utilization of advanced materials
- Customers price insensitive
- Hedges against future weight/environmental regulations