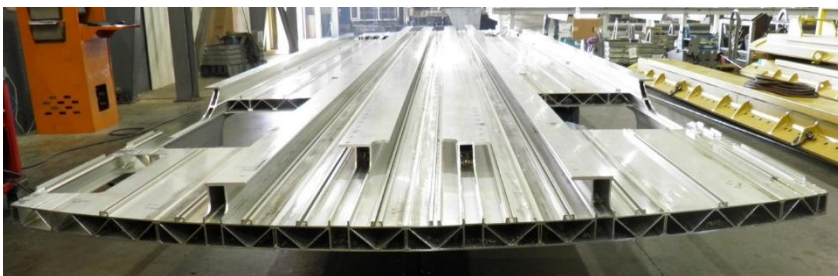


HFW Advantage...

- HFW uses a process driven approach to developing production, engineering, and quality excellence leading to repeatable and reliable production parts.



Why HFW...

HFW Solutions has been manufacturing rail car components from extrusions, castings, and plate for over 10 years. Friction stir welding is ideal for welding long seams. HFW has the capability produce:

Large Skins

Roofs | Floors | Side Walls | Panels

Integrated Structural Systems

Engineered Beams | Load Bearing Sides |
Cantrails | Posts

Advantages of Friction Stir Welding...

- Provides a significantly stronger joint than fusion welding or mechanical fastening
- Lower heat input leads to:
 - Low distortion in final product
 - Significantly reduced Heat Affect Zone
- CNC controlled – Reduced defects in weld joint
- Ability to join thicker, higher strength, difficult aluminum alloys
- No filler material – FSW joints retain parent metal chemistry which allows for the joining of dissimilar alloys



HFW SOLUTIONS

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