



# Small-Scale Modularization, the Whys and the Benefits

*By Russell Hillenburg*

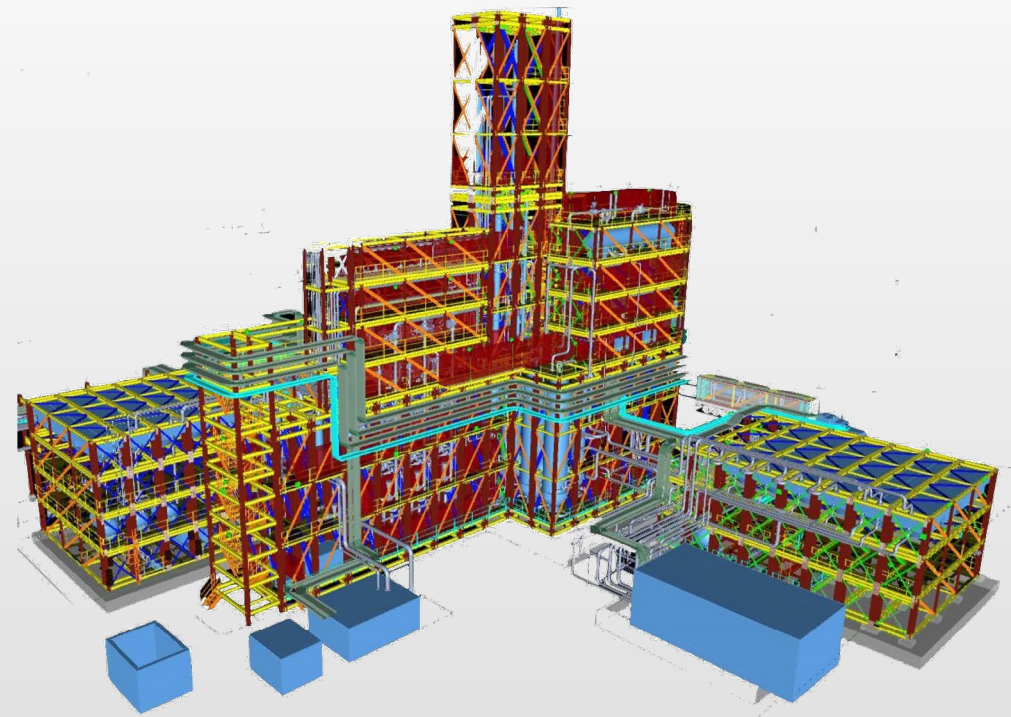


# Modular Plant Solutions

MPS is a global engineering firm specializing in process modularization and project implementation.

## Domestic and International Experience

- Development
- Design
- Procurement
- Fabrication
- Start-up
- Operations
- Maintenance

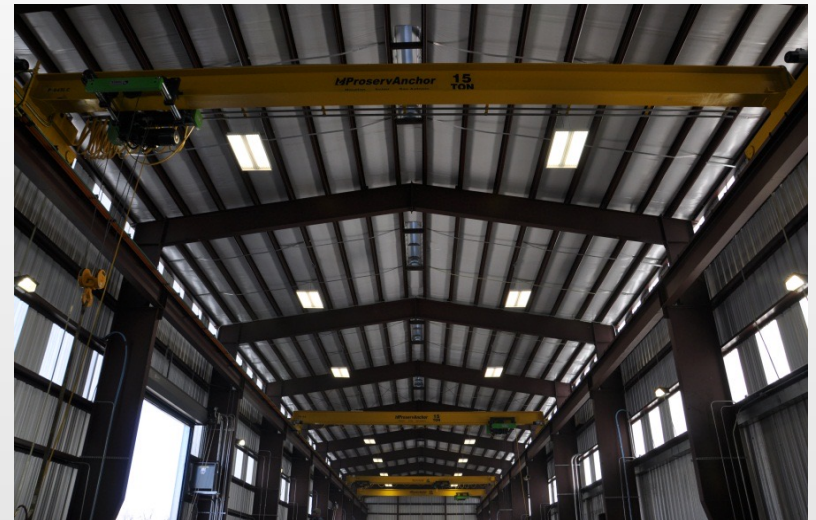


# Woven Metal Products

Tower & Reactor Process Internal Specialists

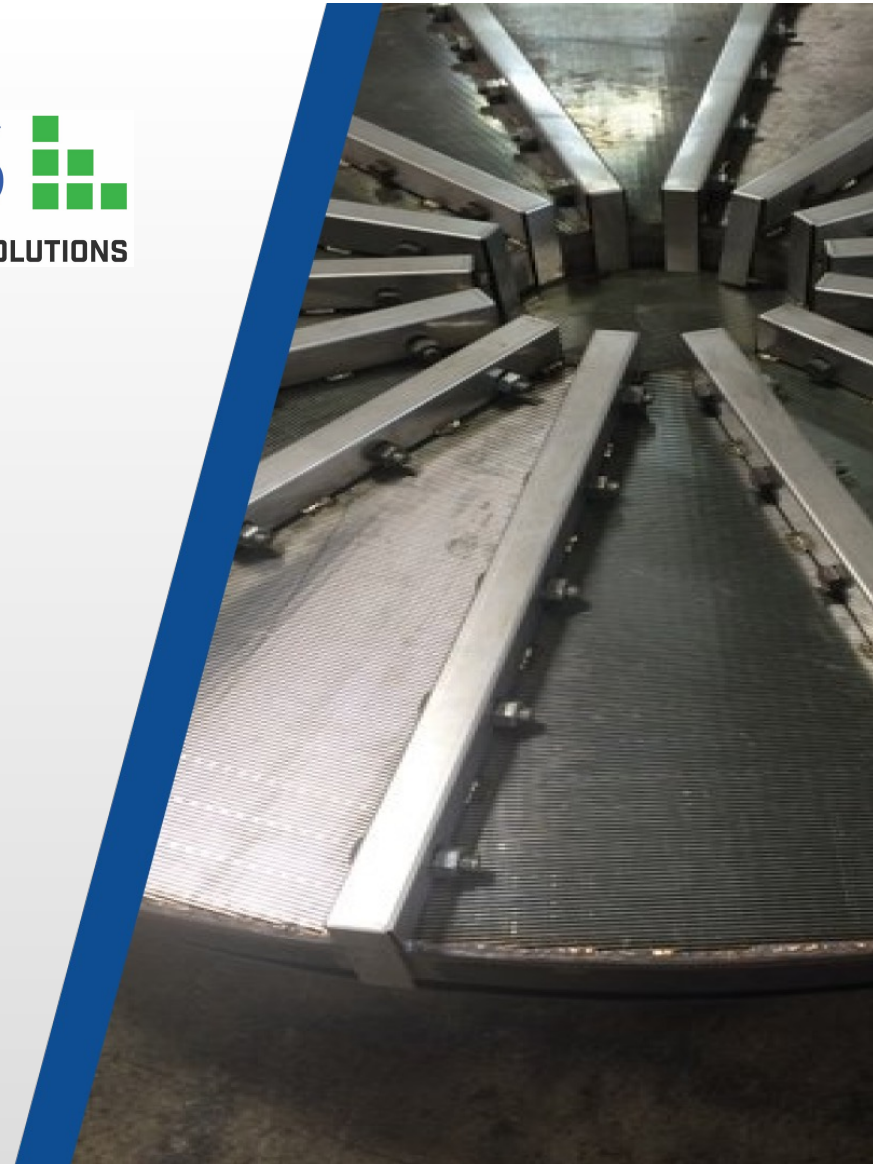
- More than 50 years of experience in fabrication, 100+ employees
- Facility sits on 82 acres in Alvin, TX
- Serves local, domestic and international clients
- ISO 9001 certified, all work done per ASME

Sect. IX





- **Reliable Quality**
- **Partnership Attitude**
- **Attention To Detail**



An aerial photograph of a city street grid, viewed from an elevated angle. The streets form a dense, repeating pattern of rectangles. A semi-transparent blue overlay is applied to the entire image, creating a monochromatic effect. The text is centered in the middle of the image.

# What is Small Scale Modularization?

# Modularization Myths

- It's always more expensive
- The project will take longer
- The footprint will be larger
- Project is less flexible
- Too large to transport

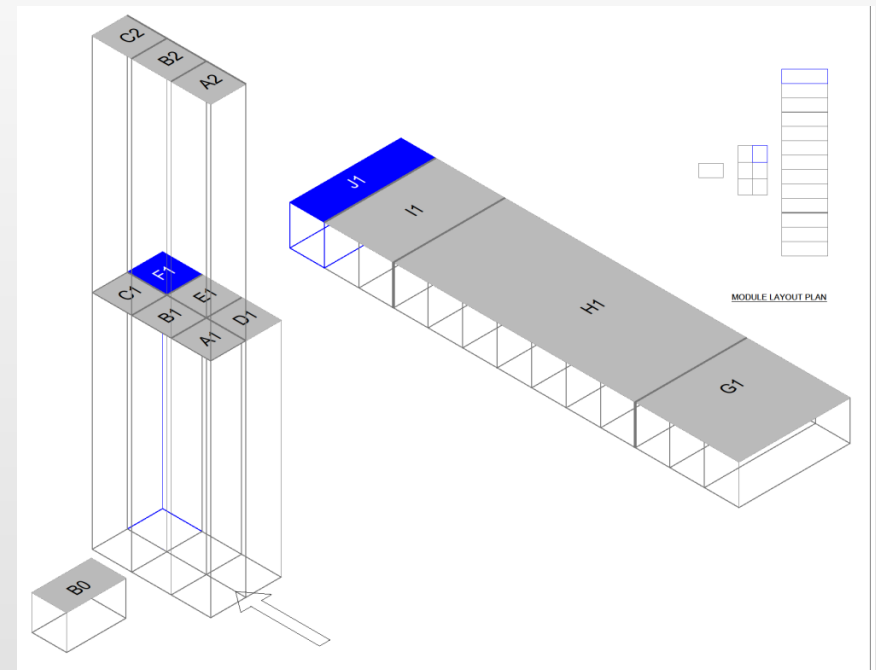


# Modularization Myths Answered

- It's always more expensive
  - *Costs are known and predictable up front*
- The project will take longer
  - *Able to work the project concurrently*
- The footprint will be larger
  - *Work multiple parts of the site in closer proximity*
- Project is less flexible
  - *Equal or better due to the timing of decisions*

# Keys to Small Scale Success

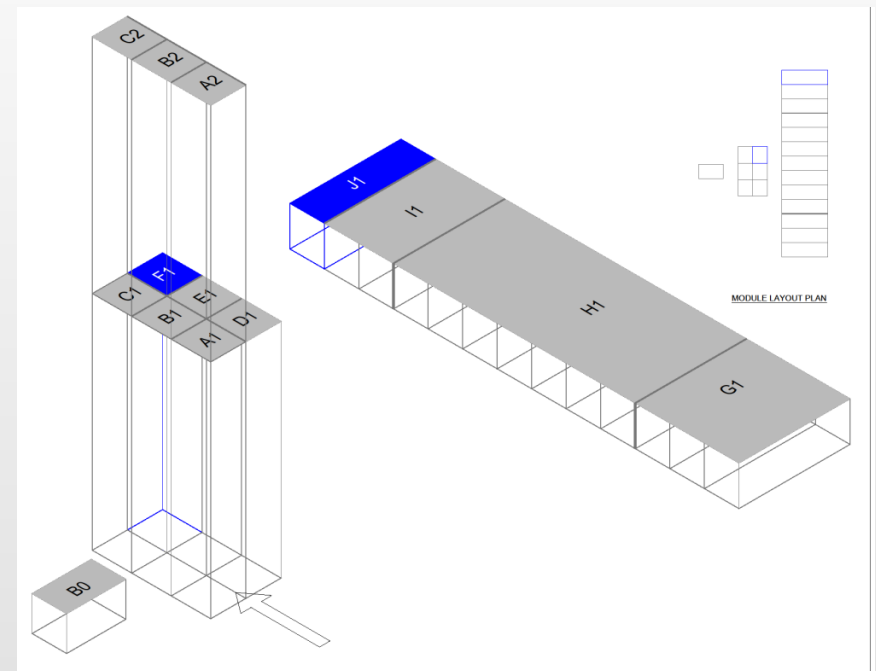
- Start with the size constraints in mind
  - Transportability often to remote locations
  - Cost analysis from manufacturing to the site





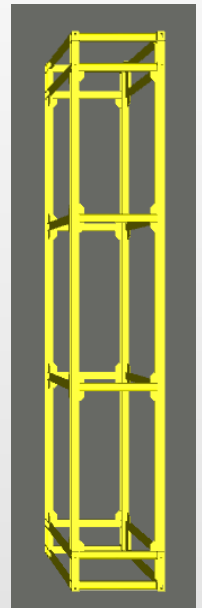
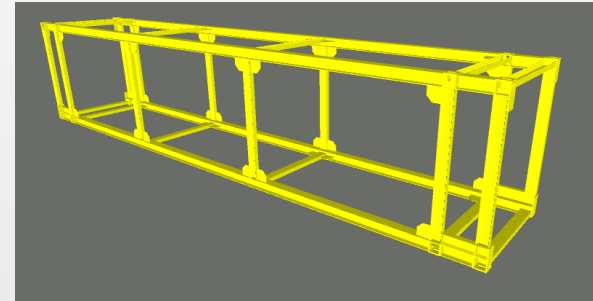
# Keys to Small Scale Success

- Simplify all possibilities and lock in design parameters early with a solid basis of design



# Keys to Small Scale Success

- Integrate the Module Size and mechanical design with process design
  - Start early with mechanical constraints

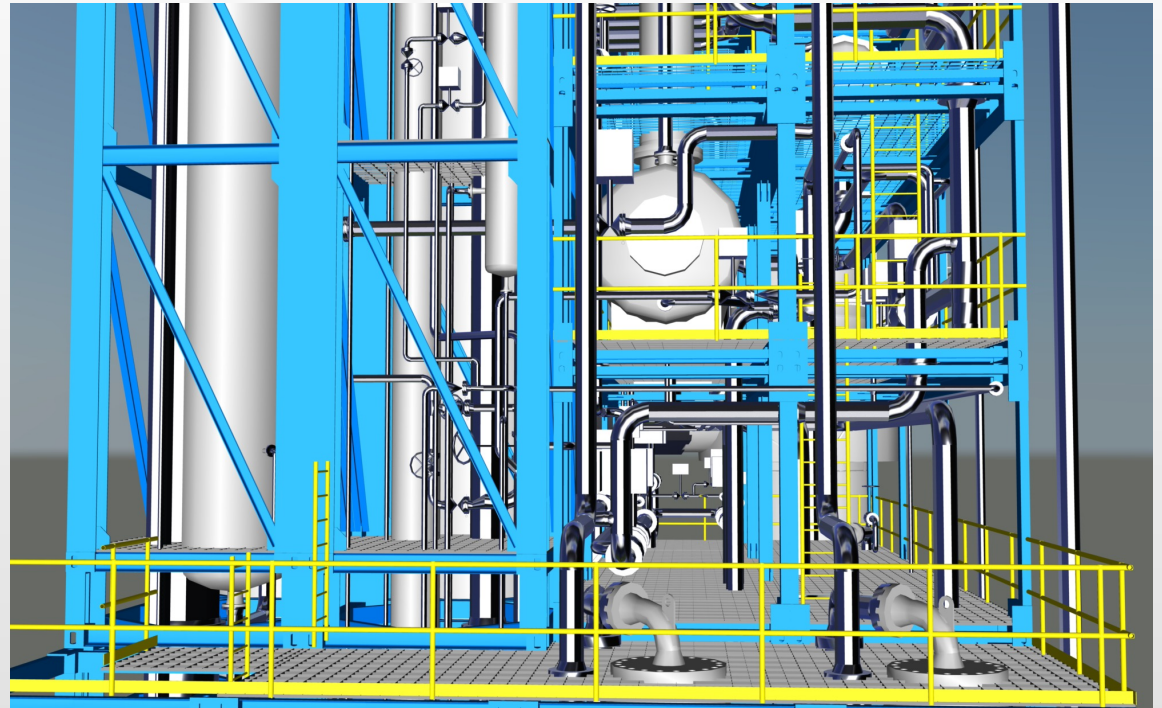




Why is Modularization so  
Important for Small Scale  
Success?

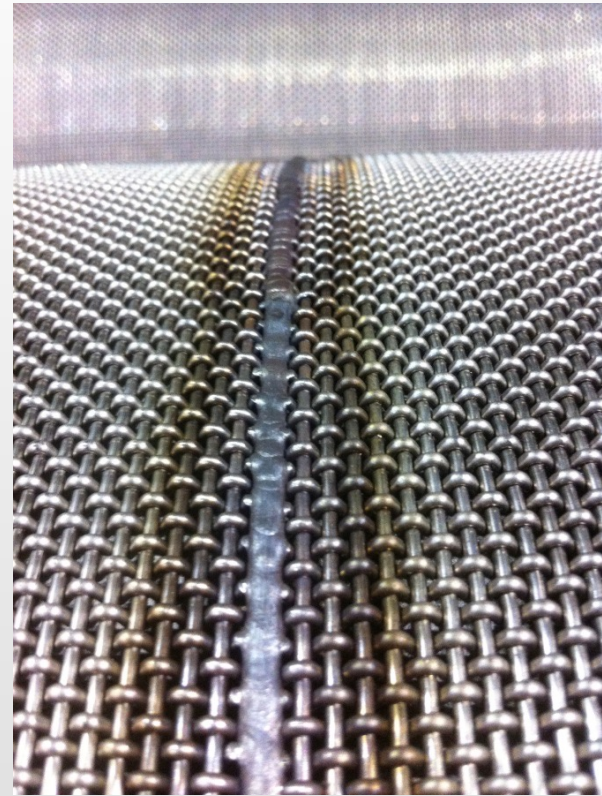
# Modularization Essential in Small Scale

- Construction crews working in close proximity
- Advantages to repeatability
- Smaller projects so less room for schedule and financial error



# Modularization Essential in Small Scale


- QUALITY
- CONSISTENCY





WOVEN METAL PRODUCTS



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# Thank You



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