



CASE STUDY

Machine Preformed Piping Offers Savings and Timely Delivery for New Biodiesel Plant

CLIENT CHALLENGE

Mid-Atlantic Bio-Diesel recently constructed a new 6MM GPY biodiesel refinery in Clayton, DE, and contracted APEX to provide comprehensive piping and fabrication solutions for the facility's processing and service lines. The project called for:

- › 4,954 feet of stainless steel pipe and tube process lines
- › 13,526 feet of carbon steel process and service lines
- › Installation within a limited space
- › Extensive elbow joints, direction changes, and pipe spools

APEX SOLUTION

A conventional all-welded piping system would take many detailed spool drawings, welded fittings, butt welds, welded flanged connections, and extensive fieldwork. APEX developed a prefabricated, machine-formed piping solution that would save significant time and money. 1.5D close radius pipe bends have the same dimensions as standard long radius butt weld elbows and cost significantly less. Roll flared lap joints and cost-effective flanges would enable easy alignment and a fast installation time. Prefabricated pipe spools were machine-formed directly from isometric drawings, eliminating the time and costs of preparing individual drawings for each spool in the system.

- › ~3,715 feet of stainless steel and high alloy piping prefabricated
- › ~10,144 feet of carbon steel pipe prefabricated
- › 686 pipe bends
- › 504 flared laps

PROJECT RESULTS

APEX's prefabricated, machine-formed piping solution eliminated 1,372 butt welds, 300 flange welds, 686 elbow fittings, and 100 site X-rays from the project. Preformed bends and rotating backup flanges significantly reduced installation costs compared to using conventional, all-welded fabrication techniques, achieving Mid-Atlantic Bio-Diesel's objectives of a cost-effective, quality-enhancing piping system.



**Talk to us about
your next project.**

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