



FMF Engineering, Corporation

Engineered Piping & Mechanical Design Services

Chemical / Petrochemical / Power Industries

Company

FMF Engineering provides consulting, engineering, and field services specializing in the design of critical piping and mechanical systems with expert design of piping systems operating at extreme temperature and pressure. FMF's proven design and field experience in specialized process units including, but not limited to, Fluid Catalytic Crackers, Hydrocrackers, Hydrotreaters, Reformers, Cokers, Catofin® units, Ammonia Synthesis units, Power Steam Extraction, and Waste Heat Recovery systems.

With a fundamental and sound understanding of the behavior of mechanical piping systems, FMF offers realistic engineering and cost effective design solutions including the proper application of pipe system supports (springs), restraints (snubbers), guides, anchors, and expansion joints for design / operating conditions considering the demanding environment of startups, planned or emergency shutdowns, and process excursions.

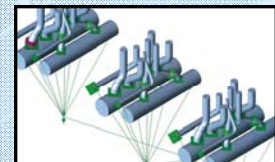
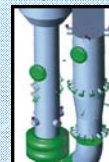
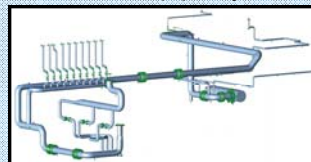
Regarded as one of the industry's most talented experts, Mr. Bruce Foote, P.E., FMF's President and Chief Engineer, has over 40 years' experience in the design, construction, and operation of piping and mechanical systems in the chemical, petrochemical, and power industry. Under Mr. Foote's direction, FMF provides practical engineering and economical solutions for demanding projects.

Engineering and Consulting

- Specialized piping engineering for critical rotating equipment and vessel / reactor nozzles:
Pumps Compressors Steam Turbines Gas Turbines Power Recovery Turbines (PRT)
- Front end engineering and detail design CAD packages.
- Industry standard computer modeling for pipe stress analysis including finite element analysis.
- Options studies to improve longevity of vulnerable mechanical and piping systems.
- Process unit mechanical-piping system integrity studies.
- Equipment and specialty item engineering, estimating, and procurement.
Expansion Joints Spring Supports Snubbers Guides / Anchors Counter Weights
- Expert witness services.

Field Services

- On site field technical support for new construction & turnaround projects.
Owners Rep Inspections Punch List Conformity Reporting (Mechanically Fit For Service)
- Mechanical & piping reliability audits, diagnostics, and repair / replacement support:
Spring Support audits Expansion Joint Audits Piping Walk Down Audits
- Mechanical & piping troubleshooting including new construction & turnarounds for critical piping systems:
Excessive Pipe Vibration Flange Leakage Pump Misalignment Over-stressed Nozzles
Expansion Joint Failure Sagging Pipe Degraded Supports Deformed Vessels
- Piping surveys and as-built piping analysis.
- Shop inspections for specialty mechanical items (spring supports, expansion joints, valves, piping assemblies, or other related pipe system equipment).



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