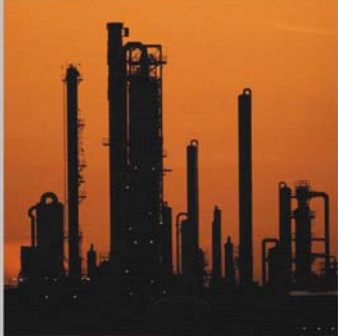


APTECH Engineering Services, Inc. Petrochemical Group



Maintenance and Reliability Availability Improvement Services



Aptech Engineering Services, Inc. (APTECH) offers a number of consulting and analytical services that allows you to achieve maximum production availability at the best possible cost. Whether your plant is old or new, our maintenance and reliability experts can apply their knowledge and state of the art tools to improve your bottom line. APTECH's technology provides the bridge between engineering and economics, using qualitative and quantitative approaches that support risk-informed decisions.




APTECH Maintenance Support

- ◆ Applies a systematic, engineering focused approach to optimizing plant production availability, aligning maintenance resources with equipment criticality.
- ◆ Provides forecasts of future plant availability based on equipment aging, targeted equipment replacement, and on the frequency of scheduled and unscheduled outages.
- ◆ Allows owners of one or more plants to develop and implement improvement portfolios that provide an optimum return on investment considering plant, system, and equipment worth.
- ◆ Provides for in-depth assessment of plant maintenance organizations and programs to identify opportunities for improvement that are the basis for cost-effective strategies for moving forward.
- ◆ Enhances and extends other APTECH services offerings such as Risk Based Inspection and Pipeline Integrity Management.



Plant Reliability, Availability, Maintainability (RAM) and Life Cycle Cost Analysis

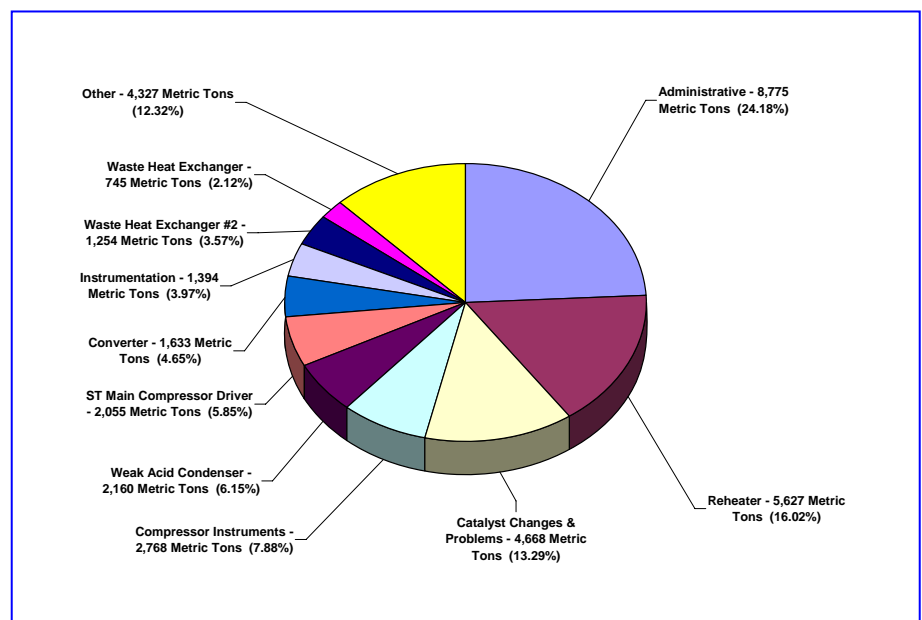
- 
- ◆ New Design and Upgrade Design Optimization
 - ◆ Life Extension Cost Optimization
 - ◆ Business Risk Forecasting and Quantification
 - ◆ Spare Parts Analysis
 - ◆ RAM Data Development and Mining

Maintenance Organization Support

- ◆ Organization Assessment
 - Objectives and Leadership
 - Infrastructure and Utilities
 - Performance Assessment and Improvement, Budgeting, Technology, and Resources
 - Processes, Procedures, Best Practices, and Systems
- ◆ Turnaround Assessment and Planning
- ◆ Equipment Reliability Improvement

Engineering Support

- ◆ RAM Model Development and Evaluation
- ◆ Life Cycle Forecasting
- ◆ RAM and Life Cycle Cost Forecast Course Training
- ◆ Life Extension Investment Risk Analysis
- ◆ Reliability Centered Maintenance (RCM) Program Development and Implementation
- ◆ Litigation Support



For More Information, Contact One of These Offices.

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