Markets in which PROCESS has completed projects include:

- Alternative Fuels
- Batch Chemicals
- Continuous Chemicals
- Food Grade Materials and Beverages
- Metals Processing
- Minerals and Rare Earth Materials Refining
- Nuclear Materials Processing
- Oil Field/ Pipeline/ Terminals
- Petrochemicals
- Petroleum Refining
- Pharmaceuticals
- Polymers/ Rubber/ Paints/ Coatings
- Power Generation and Fuels
- Waste Treatment
- Water Treatment

PROCESS is available to perform work for clients in most parts of the world. We have over 55 chemical process engineers on staff and have completed projects for clients in North America, South America, Australia, Europe, the Middle East, India, and China.

PROCESS is flexible and is set up to perform any type of process engineering work, from optimization studies to new equipment process specifications to operational assistance. All work completed provides the client with high quality, economical solutions regardless of project size.

For more information about our qualifications, experience, and staff, visit our website at:

www.ProcessEngr.com
Process Engineering

Process Engineering Associates, LLC (PROCESS) has experience in providing a wide range of process engineering services, including:

**Process Design**
- Alternatives evaluation/feasibility studies
- Conceptual process design (Front End Engineering Design: FEL-1, FEL-2 and FEL-3 process engineering support)
- Process design packages
- Process simulation and modeling
- Mass and energy balances
- Process Flow Diagrams (PFDs)
- Piping and Instrumentation Diagrams (P&IDs)
- Process control diagrams
- Equipment specifications
- Capital Cost Estimates (CAPEX)
- Operating Cost Estimates (OPEX)
- Capacity debottlenecking / revamp studies
- Independent 3rd party design reviews
- Utility systems evaluation
- Licensed technology screening studies
- OSBL systems process design
- Technical bid review
- Owner's process engineer

**Process Modeling and Simulation**

PROCESS uses licensed commercial process simulation software and in-house simulation programs to perform:
- Detailed mass and energy balances
- Unit operations design / evaluation
- Piping system hydraulics calculations
- Relief and flare system design / evaluation
- Whole Plant Models

**On Site Operation Support Services**

- Commissioning and startup
- Process evaluation, troubleshooting and optimization
- Debottlenecking
- Operating procedures and process documentation development
- Operator training

**Additional Capabilities**

- Relief valve sizing
- Flare loading studies

Process Safety Services

PROCESS offers the full spectrum of process safety services including:
- Process Hazards Analysis (PHA)
- SIL Verification and Safety Requirement Specification (SRS)
- SIL selection analysis
- Layer of Protection Analysis (LOPA)
- Failure Mode and Effects Analysis (FMEA)
- Process safety compliance audits and complete program development
- Process safety information development, such as relief valve sizing, safe upper/lower limits, etc.
- Process safety training courses

Overall Process Oversight

PROCESS has the specialized knowledge to oversee your entire project from a process point of view. We work with detail engineering and fabrication companies that can provide a turn-key project to meet your needs. PROCESS can provide oversight of projects from conception through startup to ensure that the process design is not jeopardized. With Process Engineering Associates' process design package and process project oversight, you will receive an operationally effective plant installation.