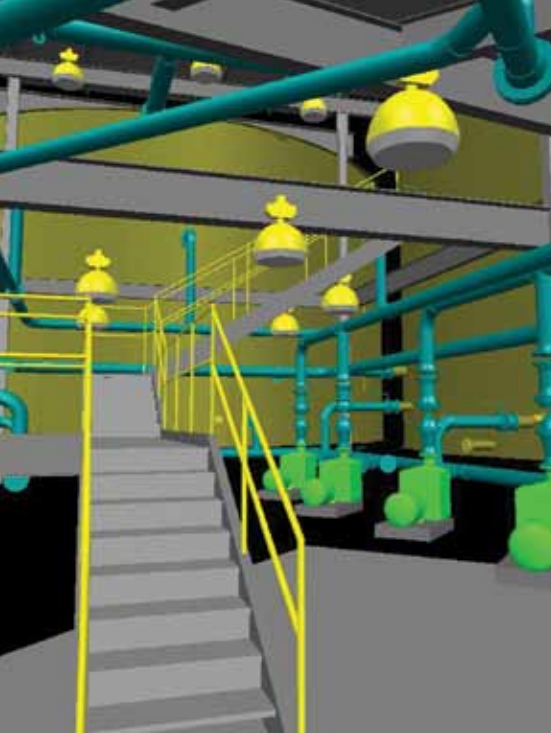




Chemical Solutions



 **ssoe**™



Why SSOE Group?

SSOE has extensive experience in providing complete value-added solutions to the chemical industry. As a knowledgeable veteran team with diverse capabilities, we are able to develop integrated solutions to issues that affect plant performance, safety, profitability, and production costs. You'll find we are equally adept at projects involving new systems for the traditional production of specialty chemicals as we are at solving utilization problems or capacity improvements in existing facilities.

Our diverse range of experience is applied across various industries - from the traditional production of specialty chemicals, petroleum and refining, to ethanol, biodiesel, and wastewater treatment systems.

The final facility is an integration of all the firm's disciplines and the knowledge to meet applicable code compliance including environmental, OSHA, and insurance regulations.

Testimonial

"Ten years ago we relied on SSOE to provide a full range of services to get our catalyst manufacturing facility up and running. They have made many modifications and upgrades to the plant ever since. The projects have been successful because we work together as a team with excellent engineers who are familiar with the site and our staff."

SSOE's resourcefulness helps us keep costs down. As an alternative to purchasing new equipment, SSOE has modified existing equipment or assisted in the purchase of used equipment for projects with tight budgets. I appreciate how they keep our interests at the forefront of each project."

L. Bryan Aller
Manager of Engineering
Grace Specialty Material

Technical Specialties

- Front-end concept engineering and studies
- Project management
- Project controls
- Cost estimating
- Scheduling
- Resource planning
- Concept design
- 3D CADD modeling
- P&ID development
- Process hazard reviews
- Turnaround expertise
- Utilities and infrastructure (roads, sewers, power)
- Equipment specification
- Vessel, tank and pump sizing
- Process piping and pipe stress analysis
- Batch processing for specialty chemicals
- Hazardous and flammable material storage and handling
- Permitting
- Process controls
- Detailed engineering
- Procurement and construction support

Project Types

- Catalysts
- Coatings
- Graphite / carbon
- General chemicals
- Industrial wastewater treatment
- Specialty chemicals
- Tank farm improvements
- Water purification / treatment

Representative Clients

- Akzo Nobel
- BASF
- Dow Chemical
- Dow Corning
- DuPont
- Henkel
- INEOS
- WR Grace



Philosophy

SSOE Group serves industrial and commercial clients from small businesses to global Fortune 100 firms. Best practices brought together from this diverse client base ensure your needs are addressed specifically, creatively, and cost-effectively. We not only listen, but we feel a sense of ownership for the challenges you face. Our goal is simple: to provide you with the best solution for your unique needs, deliver the best result, earn your future business, and use the relationship we build to make future projects even more successful.

SSOE Facts

- International EPCM firm with 23 locations worldwide
- 12th nationally among Engineering / Architecture Firms (*Building Design + Construction*, 2010)
- 2nd nationally among Green Industrial and Manufacturing Design Firms (ENR, 2010)
- 9th nationally among Industrial Process Design Firms (ENR, 2010)
- 9th nationally among Chemical Plant Design Firms (ENR, 2010)
- 39th nationally among the Top 100 Green Design Firms (ENR, 2010)
- Frontrunner in the practical utilization of Building Information Modeling
- Our energy consulting service offers a holistic approach to meeting your renewable energy, conservation, and sustainable design goals
- Our project management standards are drawn from the Project Management Institute. In fact, SSOE's goal is to have all of our project managers earn its prestigious designation of Certified Project Management Professional (PMP).
- SSOE offers program management services from conception through construction, to commissioning and start-up, for seamless project delivery
- Global experience includes projects in more than 30 countries
- ISO 9001 certified





Markets

- Government
- Life Sciences
 - Education
 - Healthcare
 - Pharmaceutical
 - Science and technology
- Manufacturing / Process
 - Automotive
 - **Chemical** / Petroleum
 - Consumer products
 - Food
 - General manufacturing
 - Glass
- Power
 - Investor-owned utilities
 - Municipal
 - Renewable energy
- Telecommunications

Services

- Architecture
- BIM
- Construction management
- Data communication
- Energy consulting
- Engineering
- Loss prevention
- Machine design
- Master planning
- Procurement
- Program / Project management

Locations

- Alliance, OH
- Beijing, China
- Cedar Rapids, IA
- Chicago, IL
- Cincinnati, OH
- Columbus, OH
- Irvine, CA
- Kalamazoo, MI
- Lima, OH
- Midland, MI
- Mumbai, India
- Nashville, TN
- Newark, OH
- Omaha, NE
- Phoenix, AZ
- Raleigh-Durham, NC
- St. Paul, MN
- Seattle, WA
- Shanghai, China
- Tianjin, China
- Toledo, OH
- Troy, MI
- Washington, DC



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