



carbon fiber and advanced composites

⌘ **SSOE**[®]. making clients successful.



Why SSOE? The SSOE Experience is the combination of our Value Promise and Great Client Service that results in trusted relationships.

To consistently exceed clients' expectations is a common goal in our industry. So, how is our promise of outstanding performance any different from others? We have proof. Greater than 98% of clients surveyed would recommend SSOE Group to a colleague. And more than 150 of our clients have been with us for at least 20 years. These endorsements are a result of our Great Client Service—our corporate-wide commitment to understand and exceed your expectations and deliver unexpected benefits.

For decades, we've found ways to deliver greater value to clients. You can count on us to deliver high quality projects, on schedule, with fewer problems, and for lower total cost to save you time, trouble, and money. Through this Value Promise, SSOE returned 105% of our fee to clients in the form of project savings over the last 5 years.

Carbon fiber and advanced composites are revolutionizing the manufacturing industry and beyond, with the ability to make specialized parts and products that are stronger, longer-lasting, lightweight, and environmentally friendly. A leader in advanced technologies and a Top 10 Manufacturing Design Firm for the past 6 years (*ENR*), our team of professionals is directly positioned to help clients expedite products to market while improving their bottom line. We do this by designing quality facilities and efficient processes that provide innovative solutions tailored to your individual needs.



As an engaged member of the **Institute for Advanced Composites Manufacturing Innovation (IACMI)**, SSOE understands the varying operational challenges experienced by carbon fiber and composite material manufacturers, as well as the ongoing need to keep costs low. Whether helping to launch an idea in its infancy, designing an accelerated process to complement mass production, or assisting with commissioning and start-up, SSOE continues to be a diverse and dynamic player in the market.

Advantages

- Our conceptual master plans reflect your short and long term business goals associated with developing new facilities including capital constraints, operational efficiencies, and market position.
- Continually evolving with the carbon and advanced composites industry, our flexibility and creativity allows us to fully support a project development environment that demands predictability in terms of quality, schedule, and budget, addressing constantly changing specifications within time constraints.
- Designing unique and customized processes in specialized environments is our forté. We complete a majority of our design in 3D, achieving optimal facility design from conceptual layout to final production.
- Collaboration is key. Through our work on thousands of industrial projects, we have developed highly integrated delivery methods, leading to higher quality results and significant schedule compression. SSOE has set itself apart from the competition by delivering these integrated project solutions to the carbon fiber and advanced composites industry.
- SSOE has the tools and capabilities required to design, install, evaluate, control, and build all aspects of a manufacturing environment, giving you the advantages of one point of control and fully integrated services.



Technical Specialties

- 3D visualization / BIM modeling
- Arc flash hazard analysis
- Automation system design
- Budgeting
- Capacity studies
- Cleanroom design
 - Renovation
 - Upgrades
 - System solutions
- Complete facility design
 - Architectural
 - Electrical
 - Mechanical
 - Process
 - Structural
- Control system upgrades
- Cost estimating
- Dust collection system design
- Front-end Loading (FEL)
- Industrial ventilation system design
- Material handling system design
- Material shipping / receiving area design
- Power system analysis
- Process control system design
- Process system integration
- Production facility design
 - Pre-preg
 - Shape / Fiber
 - Pitch handling
 - PAN fiber
- Site selection / evaluation
- Thermal process design
- Utility / Infrastructure system design
- Value engineering
- Virtual Design and Construction (VDC)
- Wastewater treatment system design

Locations

Albany, NY
Alliance, OH
Atlanta, GA
Birmingham, AL
Chandler, AZ
Chengdu, China
Cincinnati, OH
Columbus, OH
Hamburg, Germany
Huntsville, AL
Kalamazoo, MI
León, Mexico
Lima, OH
Midland, MI
Monterrey, Mexico
Mumbai, India
Nashville, TN
Omaha, NE
Penang, Malaysia
Portland, OR
Raleigh-Durham, NC
Riverside, CA
St. Paul, MN
Santa Clara, CA
Shanghai, China
Shenzhen, China
Toledo, OH
Troy, MI
Washington, DC

Markets

Energy
Life Sciences
Manufacturing / Process
Telecommunications

Services

Architecture
Construction management
Data / Fire / Security
Energy consulting
Engineering
Master planning
Procurement
Project / Program management
Site selection
Tool install
Virtual Design and Construction

Rankings

Engineering News-Record (ENR)

- Top 10 Manufacturing Design Firm for the past 6 years
- Top 20 Chemical Plant Design Firm for the past decade
- Top 25 Industrial Process Design Firm for the past decade

Building Design + Construction

- Top 10 Engineering / Architecture Firm for the past 5 years
- Top 10 Industrial Engineering Firm for the past 5 years
- Top 15 BIM Engineering Firm for the past 6 years

Named "Best AEC Firm to Work For"
(Building Design + Construction)

Named a "Great Workplace"
(Great Place to Work®)

SSOE Facts

- SSOE was founded in 1948 and currently has more than 20 locations worldwide.
- We are a global project delivery firm for architecture, engineering, and construction management, with projects in 40 countries.
- SSOE offers program management services from design through construction, to commissioning and start-up, for seamless project delivery.
- SSOE's focus is using the appropriate project delivery method for your goals, including Virtual Design and Construction (VDC), which brings our clients better and faster results through more integrated teams and advanced technologies. Even when a more traditional delivery model is used, you'll see significant benefits from the collaboration strategies and technological capabilities our leadership in VDC necessitates.



www.ssoe.com/carbonfiber



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