

PROCESSING SYSTEMS AND EQUIPMENT FOR INDUSTRIAL APPLICATIONS



MUELLER[®]

Paul Mueller Company

Mueller® is Your Full Service Provider

Since our inception in 1940, Mueller® has evolved from a small-scale fabricator into a global process solutions provider with nearly one million square feet of manufacturing space under roof. Our products are used in over 100 countries in a wide variety of applications. We offer a full range of tanks/vessels from shop-fabricated alloy vessels up through 20 feet in diameter to field-fabricated vessels up through 2,000,000 gallons, but we do more than tanks — we provide process solutions. We offer integrated systems, modular fabrication, field construction, plant maintenance and repair, and complete turnkey project execution. Mueller delivers outstanding equipment and unique solutions to the process industries with our technical expertise, innovative engineering, and manufacturing resources.

We know that building a quality product starts from the ground up. Our primary objective is to improve the profit performance of our customers through our product and service offerings. Mueller has been built by focusing our extensive resources, process experience, and craftsmanship on solving the processing needs of our customers.

State-of-the-art manufacturing facilities. Our centrally located Springfield, Missouri, facility is equipped with metal cutting, forming, and welding equipment that provides us with the most state-of-the-art fabrication and machining capabilities available today.

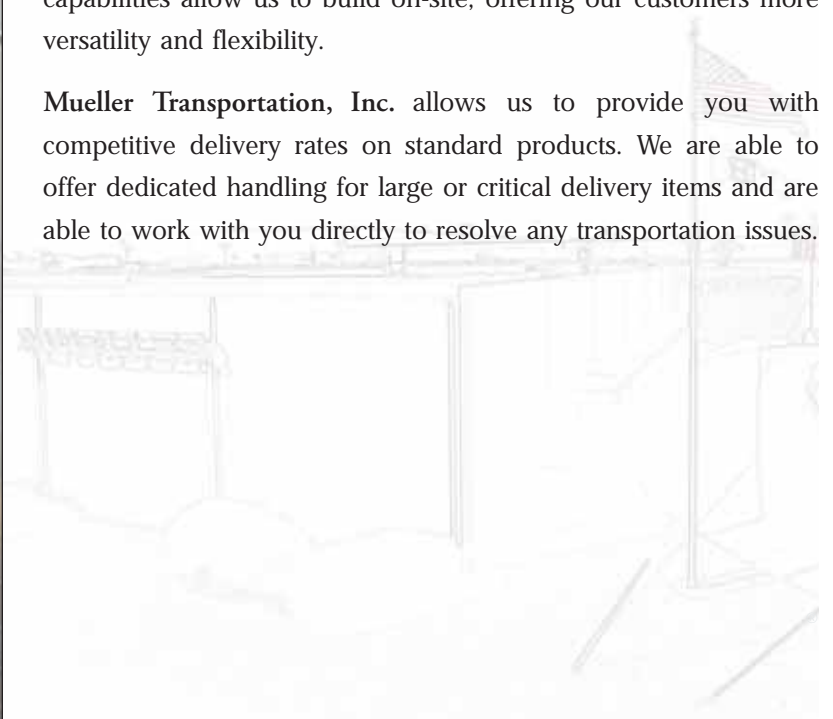
Mueller products are made by our skilled craftsmen, whose average experience exceeds 15 years. On any given day, their talent and pride of workmanship can be observed in our production bays. Our process is well defined, and Mueller team members fully understand the importance their individual roles play in producing a quality product. Our central United States production facility lowers your transportation costs and speeds the delivery of product to your location.



Factory technicians and field service available. Our trained factory personnel offer rapid response to your service needs.

Mueller Field Operations, Inc. Mueller's field construction capabilities allow us to build on-site, offering our customers more versatility and flexibility.

Mueller Transportation, Inc. allows us to provide you with competitive delivery rates on standard products. We are able to offer dedicated handling for large or critical delivery items and are able to work with you directly to resolve any transportation issues.





Mueller Industrial Processing Equipment

Designed and Built for the Rigorous Demands of Chemical/Industrial Processing

Processing Tanks

Processing hazardous fluids under high pressures and corrosive environments is a job you don't trust to just any equipment. When you need cost-effective, corrosion-resistant processing equipment, turn to the company with the skill, technology, and experience necessary to meet the critical demands of industrial processes — Mueller. We're known worldwide for top quality, custom processing equipment designed and built for maximum durability and economy. Our capabilities include mixing vessels, reactors, and fermentation, evaporation, solution, and holding tanks.





A 70-foot long vessel made of half-inch thick stainless steel being readied for shipment.

Reactors

Our staff of experienced sales and engineering personnel is available to assist you with proper selection of materials, heat transfer analysis, structural design, and agitation calculations. We specialize in chemical and mechanical polishing of product contact surfaces to provide for superior cleanability and improved corrosion resistance. Whether you need small, thin gauge tanks or reactors up to 2 inches thick or 140 feet long, we have the experience to meet your needs.



Mueller Industrial Processing Equipment

Designed and Built for the Rigorous Demands of Chemical/Industrial Processing

Shell-and-Tube Heat Transfer Equipment

Mueller's state-of-the-art shell-and-tube designs minimize the effects of fouling, provide trouble-free start-ups, and increase your operation's run times.

With many years of process experience, our engineers design high performance shell-and-tube heat transfer equipment specifically for your application, as opposed to a "one size fits all" approach.

If you are interested in a heat exchanger that is built to last, will minimize down-time, eliminate water-hammer issues, and reduce your maintenance costs, Mueller shell-and-tube designs are the answer.





SHELL-AND-TUBE HEAT EXCHANGERS

- ◆ All TEMA types

EVAPORATORS

- ◆ Climbing film
- ◆ Falling film
- ◆ Multiple effect

REBOILERS

- ◆ Horizontal thermosiphon
- ◆ Vertical thermosiphon
- ◆ Kettles

CONDENSERS

STEAM GENERATORS

Mueller Industrial Processing Equipment

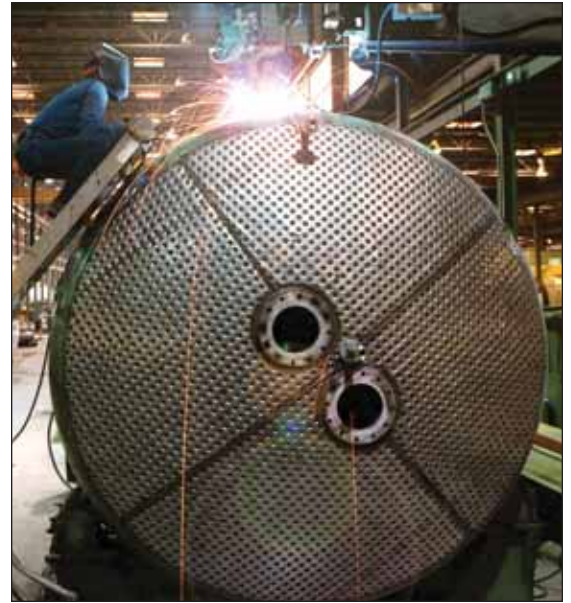
Designed and Built for the Rigorous Demands of Chemical/Industrial Processing

Heat Transfer Surface

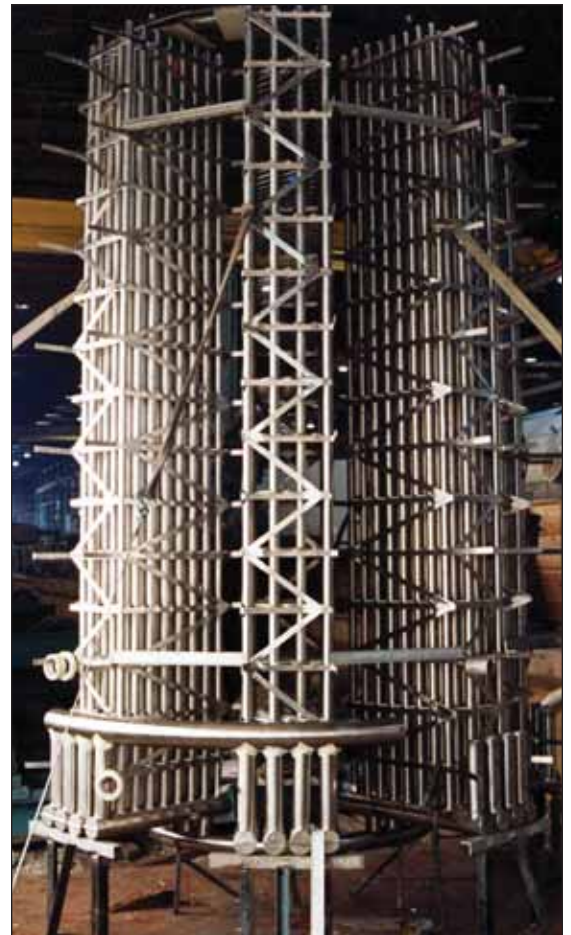
Mueller is uniquely qualified to handle large and complex fluid handling systems from project concept through installation with our broad line of heat transfer surfaces. Heat transfer options include full jacket, half-pipe, dimpled, preformed, internal coil, and our patented, inflated Temp-Plate®. Temp-Plate is an extremely versatile heat transfer surface that can be supplied in an almost unlimited number of styles, shapes, and materials.



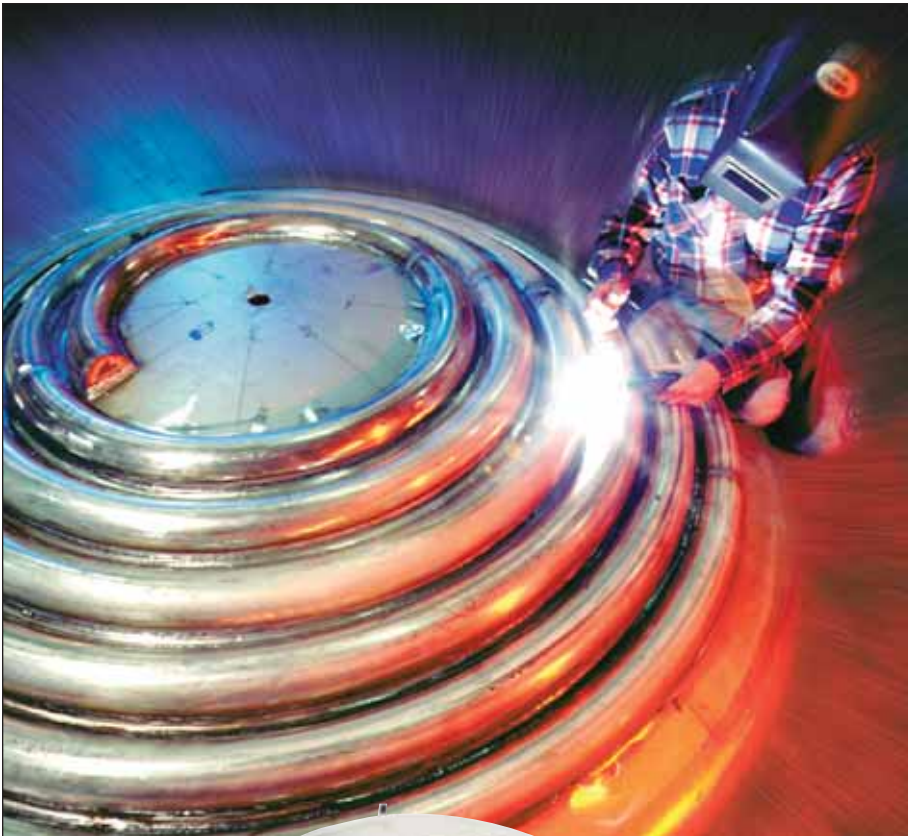
Welding dimpled jacket to a chemical vessel. Below: Welding half-pipe coil.



Welding dimpled jacketed heads to their shell sections.



Heat exchange bundles fabricated of 316L stainless steel to customer's design specifications for use in a high cell density fermenter to provide higher than usual agitation and heat removal capabilities.



This bottom half of a reactor column for use in the manufacture of explosives. It is fitted with half-pipe coil heat transfer surface on portions of the tank cylinder and on the bottom head. Internal pipe coils and the tank interior are electropolished to prevent small particles of the explosive slurry remaining after the tank has been emptied.



Single-Embossed Temp-Plate®



Double-Embossed Temp-Plate



Dimpled Heat Transfer Surface



Half-Pipe Coil



Mueller's dimpled heat transfer surface with a radial pattern is shown on these heads.

Mueller Industrial Processing Equipment

Designed and Built for the Rigorous Demands of Chemical/Industrial Processing

Mueller Field Operations, Inc.

Mueller Field Operations, Inc. offers complete construction services with particular emphasis on large field-erected tanks, ASME code-stamped pressure vessels for chemical or industrial applications, equipment installation, tank retrofit or repair, and process piping. We offer complete full-service packages consisting of the design, build, and installation stages of fabrication. We provide construction management, procurement, and field integration services that allow us to transcend the boundaries of our manufacturing facility and create superior value directly on your production floor. Our quality control process includes design, component manufacturing, equipment transportation, job-site assembly, final performance testing, and continued service and support.



Mueller Transportation, Inc.



Mueller has the capability to deliver by rail or on our own fleet of trucks. Use of our trucks, and our central location, enables us to provide quick delivery throughout the U.S.A.



Additional Paul Mueller Company Information

MATERIALS AND FINISHES

Materials available are 300-series stainless steels and virtually any nickel-based alloy or duplex stainless, such as Hastelloy®, Inconel®, AL6XN®, or 254 SMO®.

Mueller offers a variety of finish options, such as hot-rolled plate for bulk chemical storage applications or pharmaceutical-grade mechanical polished or electropolished surfaces for difficult cleaning applications. We specialize in chemical and mechanical polishing.

AGITATION

Mueller fabricates a broad range of agitation systems, all designed with performance in mind, from simple paddles to axial-flow turbines or counter-rotating dual motion mixers with side and bottom scrapers.

QUALITY ASSURANCE

- ◆ Steam cycling
- ◆ NDT (Level 3)
- ◆ Radiographic testing
- ◆ Laser alignment
- ◆ Ultrasonic testing
- ◆ Tensile testing
- ◆ Positive material identification (PMI)
- ◆ Liquid penetrant leak detection
- ◆ Mass spectrometer leak detection
- ◆ Refrigeration laboratory testing
- ◆ Surface profile measurement
- ◆ Halogen leak detection
- ◆ Video probe inspection
- ◆ Magnetic particle testing
- ◆ AWS - SCWI (resident)
- ◆ Hardness testing

CERTIFICATIONS

- ◆ Pressure Vessel Code (ASME)
- ◆ Petroleum Institute (API)
- ◆ Canadian Standards (CSA)
- ◆ Underwriter's Laboratory (UL)
- ◆ Conformance Europeenne (CE)
- ◆ Chinese Pressure Vessel Code (SQLO)
- ◆ 3-A compliance
- ◆ TEMA
- ◆ PED
- ◆ SQLO

Springfield, Missouri



Osceola, Iowa

MUELLER®

P.O. Box 828 • Springfield, Missouri, 65801-0828, U.S.A.
Phone: (417) 575-9000 • 1-800-MUELLER • Fax: (417) 575-9669
www.muel.com • E-mail: processing@muel.com