

**THINK**

*Tri-Mer*<sup>®</sup>

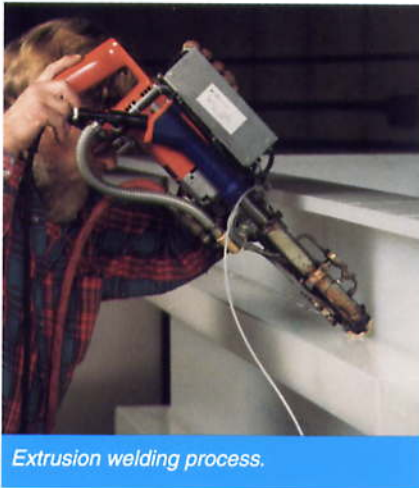
**America's Tank Authority  
for More than 34 years**



## **Heavy Duty Polypropylene Tanks**

- **Highest Chemical Resistance**
- **Highest Mechanical Strength**
- **Longest Service Life**

# Tri-Mer Leads the Industry in the Fabrication of High-strength Polypropylene Tanks



Extrusion welding process.

**To assure highest strength at corners and seams,** Tri-Mer technicians use programmable extrusion welding systems. The extrusion welder operates under high temperature and pressure, grinding and melting virgin polypropylene and extruding it through a die. The molten material is mated to virgin sheet stock to form a molecular bond equal in strength to solid sheet.

**To insure seamless structural integrity,** Tri-Mer technicians use specially engineered, programmable welders. A hot blade heats the material; when the blade is lowered, the system fuses the sheet ends, creating a bond equal in strength to seamless virgin grade material.



Technician with extrusion welder fabricating tank flange.



Automatic bending machine forming tank corner.

To prevent what has been known as the #1 problem with plastic tanks...**and to insure full strength at all bend sites,** Tri-Mer uses an automatic bend system. A heated knife serrates sheet stock at the bend site. When ejected, the machine creates a corner equal in strength to unfabricated virgin grade material. Corners formed in this manner eliminate corner welds, which inevitably cause structural weaknesses in the tanks.



Automatic welding machine joining flat sheet polypropylene.

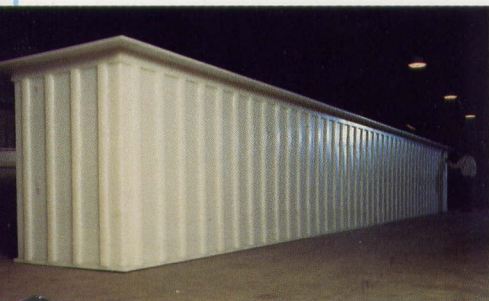


Formed 90° corner.

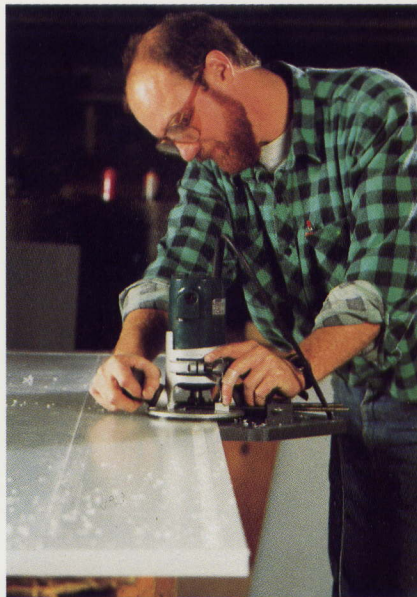


Completed 10' wide x 12' long x 8' deep H<sub>2</sub>SO<sub>4</sub> pickling tank constructed of 1" thick polypropylene with 316L stainless steel cradle support.

**To distribute sidewall stresses evenly,** Tri-Mer manufactures using a routed bottom plate. The bottom plate is up to 1½" solid polypropylene for maximum rigidity; a machined channel is created in the plate, to which sidewalls are fitted, and extrusion-welded on both sides. This assures maximum strength without distortion and eliminates the shear point. With this Tri-Mer feature, the inset position of the vertical wall—rather than the weld itself—holds the sidewall in place. The weld thus provides only the leak-proof seal. A Tri-Mer tank has the significant, added advantage of double weld-strength—inside and outside.



Fully fabricated 45' long tank ready for exterior support structure.



Preparing bottom plate for vertical wall.

**To hold the tank in proper position and prevent bowing,** Tri-Mer tanks feature structural side supports or cradles manufactured from 316L stainless steel, coated-steel supports or welded reinforcements of polypropylene, at customer option.



Fabricating vertical members in welding jig.



Fabricating stainless steel supports.



Forming support cradle members.



Welding vertical support structures.



*Tri-Mer tank used as scrubber recirculation vessel.*

Instrumentation for automatic chemical addition, as well as level and temperature indication, can also be supplied, along with programmable, hinged covers to conserve energy and maintain process temperatures.

### Materials Options

Tri-Mer specializes in polypropylene tank manufacturing. For special applications, we also fabricate using PVC, PVDF, and other plastic materials, as well as mild and stainless steel, and special alloys. Hood and duct assemblies are also fabricated either as part of a turnkey installation or as individual components.



*Cutaway view: stainless steel structural member supporting tank.*

### Tri-Mer Tanks: Engineered for Access, Fit and Maximum Flexibility

Tri-Mer design technicians have more than 34 years experience in the design and manufacture of quality tanks for every process application. We understand the need for quick, easy access and are specialists in accommodating space constraints and your need for easy interface with existing equipment.

As part of your tank package, Tri-Mer offers a full line of material conveyance equipment: pumps, piping, etc. We also provide auxiliary systems including nozzles, gussets, baffles, heating elements, agitators and wear strips.

### Quality Control

Tri-Mer tanks have earned a reputation for highest reliability and longest service life due to a comprehensive Quality Assurance Program. The Tri-Mer program requires detailed inspection at each of five stages during manufacture: cutout, forming, welding, subassembly and final assembly.



*Custom polypropylene tank with tunnel hood assembly.*



*Custom tank with automated cover, spargers, heaters and controls.*



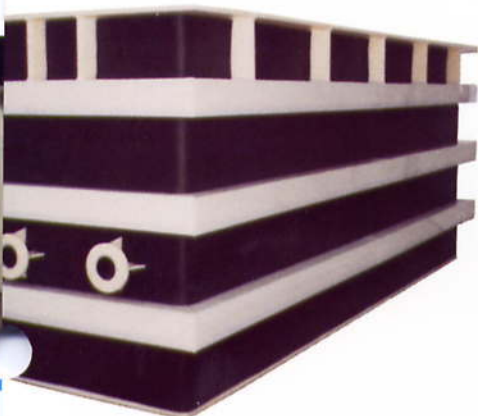
*Large 48' long pickling tank with built-in exhaust hoods complete with stainless cradle shipped as an assembly.*

# More Experience, More Design Flexibility, More Satisfied Users!



*Tri-Mer President Eugene Ruess, pioneer in the development of the cradle tank design, inspects a 40' unit.*

Tri-Mer Corporation leads the industry in the engineering and manufacture of quality process vessels. Our strength is manufacturing technology that has been developed and perfected over more than 34 years, including custom tools and techniques.



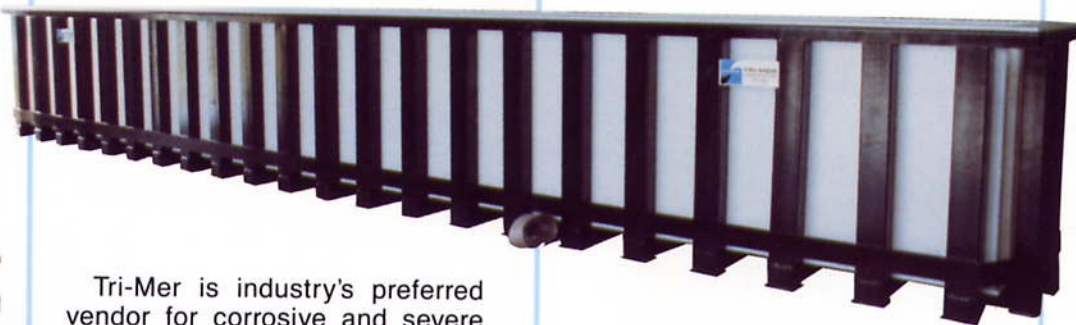
*Insulated co-polymer unit designed to operate at temperatures below 32°F.*



*H<sub>2</sub>SO<sub>4</sub> pickling tanks in operation.*

Tri-Mer specializes in the manufacture of 100% homogeneous polypropylene tanks—a rugged, long-life material which, unlike fiberglass, is **not** subject to delamination or mechanical damage. Polypropylene also eliminates the need for a tank liner, and the maintenance these liners require over time. Our tanks are available in a virtually unlimited range of sizes and configurations and can be fabricated in excess of 100' lengths and 15' depths.

Tri-Mer offers expert applications assistance, and fastest turn-around. We stand behind every installation with fast, professional service, whether it's a single tank for a plating shop or a large tank farm for a major OEM.

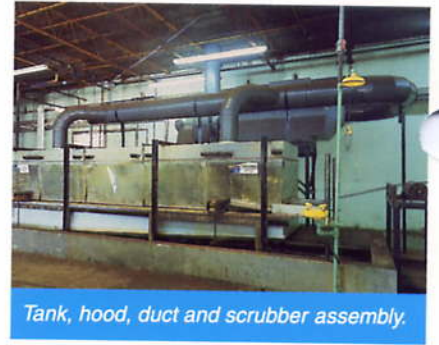


Tri-Mer is industry's preferred vendor for corrosive and severe service applications. Our most typical projects are for OEMs and job shops performing steel pickling using nitric and hydrofluoric acids, and for other metal processing involving hydrochloric and sulfuric acids. Continuous process temperatures in excess of 200°F can be accommodated.

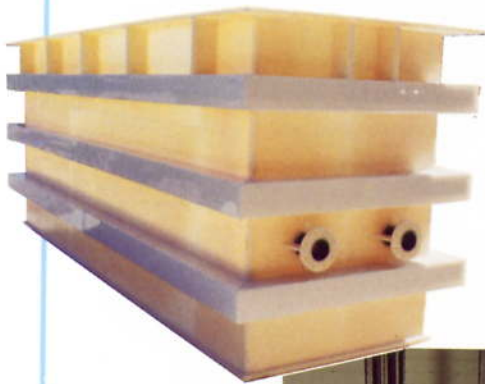
**Trust Tri-Mer. America's  
Tank Authority Since 1960.**



## Other Tri-Mer Tanks



Tank, hood, duct and scrubber assembly.



14' tall polypropylene tanks.

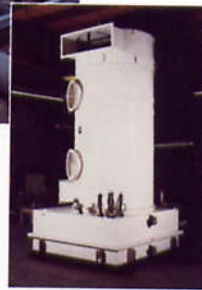
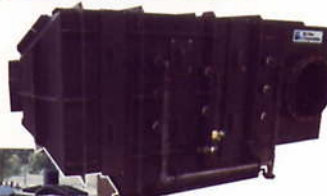


H<sub>2</sub>SO<sub>4</sub> pickling tanks.



## Other Tri-Mer Products

- Whirl Wet<sup>®</sup> wet dust collectors
- Advanced fume scrubbers
- NO<sub>x</sub>/SO<sub>2</sub> scrubbers
- Industrial odor control
- VOC control
- Chrome scrubbers
- Venturi systems
- Fans, blowers and duct systems



Practical, Innovative engineering solutions are the foundation of our business. For over 34 years, Tri-Mer has specialized in providing cost-effective solutions to real-world, air pollution control problems in virtually every industry segment.

We've worked under the strictest design constraints, in the engineering of NO<sub>x</sub> scrubbers that allow industry to expand and grow in non-attainment districts.

We've designed HCl, HF, H<sub>2</sub>SO<sub>4</sub>, NH<sub>3</sub> and dozens of other air pollution control systems that operate consistently, with no unscheduled downtime, in some of the most aggressive chemical environments.

We've designed and manufactured tanks and other fabrications that are out of the question for most manufacturers.

We're a market-driven company offering flexibility, reliability and accountability. Find out what we can do for you with our design and specification services.

 **Tri-Mer**<sup>®</sup>  
CORPORATION

**Air Pollution Control Systems**

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