



**EXCELLENCE** *“We are what we repeatedly do. Excellence, then, is not an act but a habit.”*  
-Aristotle

## INDUSTRIAL MANUFACTURING FACILITIES

From copper plating to injection molding, TRC has a wide variety of experience working on industrial manufacturing facility design. We strive to understand the requirements of not only the building systems, but also the manufacturing processes—so that the building systems positively enhance production and maintenance.

**Gould, Inc. System IV Expansion Chandler, AZ** This industrial manufacturing project involved a 65,000 square foot expansion for Gould’s copper foil production facility. Electrical engineering and design included 15 KV Class distribution from a new SRP sub-station transformer within the existing site sub-station yard. This distribution involved a loop-feed that served four single-ended 15KV to 480-volt unit substations within the new building. Provisions were designed for adding a future 15KV loop and two additional unit-substations. Low voltage distribution included motor control center, rectifier power, interior lighting and general



**Huhtamaki Phoenix, AZ** TRC has provided on-going engineering services for Huhtamaki plastic injection molding facility. Projects have included installation of a new 3600-amp production electrical service and distribution busways, installation of several injection molding and print tools, installation of power factor correction capacitors, and upgrades to facility lighting.



**Intercal Prescott, AZ** TRC provided electrical engineering for this 75,000 square foot office, production and warehouse facility for a vitamin packaging company. The project included power distribution, production and HVAC equipment power, interior and exterior lighting, and fire alarm.

**Rubbermaid Home Products Goodyear, AZ** TRC has provided engineering assistance for several projects within this Goodyear, Arizona manufacturing facility. Projects have included design for a new 65,000 square foot manufacturing space, a new 285,000 square foot warehouse space, exterior lighting upgrades, 15-KV site distribution studies, master-planning for additional warehouse expansion, and master-planning for installation of future high-production blowmold machines. TRC also has provided several load studies for Rubbermaid to review injection molding machine locations and capacities on existing distribution busways.



**EFFORT** *"It's the constant and determined effort that breaks down resistance, sweeps away all obstacles."* -Claude M. Bristol

**Triumph Corporation**

**Tempe, AZ** TRC provided design for renovation of the existing power distribution and lighting systems within a 52,000 square foot manufacturing area, as well as design for a new 96,000 square foot manufacturing, test, and of-office area.

**Metco Metal Finishing Waste Treatment System**

**Phoenix, AZ** TRC worked closely with BASX, the waste water treatment equipment supplier, during this waste water treatment system design. The project included new power distribution, equipment feeders for new pumps, exterior and under-canopy lighting, and waste water piping systems.

**REXAM Beverage Can Company**

**Phoenix, AZ** REXAM is a maker of aluminum cans for the beverage industry. This design / build project involved the installation of a 10,000 gallon hazardous liquid storage tank and the relocation of Sodium Hydroxide, Sulfuric Acid, and Hydrogen Chloride tanks. The hazardous liquid tank was located exterior to the manufacturing plant and enclosed due to the ambient weather conditions in Phoenix, Arizona. Providing this enclosure enabled compliance with current national and local codes that pertain to hazardous liquid storage and use. The engineering design services also included a new natural gas emergency generator, lights, controls, HVAC equipment, and an automatic fire suppression system.



**Eagle Picher Phoenix, AZ Grove, OK**

Eagle Picher is a diversified manufacturer of advanced technology products. TRC has provided engineering for two of their battery manufacturing facilities. The Phoenix, AZ facility included mechanical and electrical engineering for a dry room / clean manufacturing environment, office revisionis, and emergency and standby power systems within an existing 90,000 square foot building. The Grove, OK facility included mechanical and electrical engineering for manufacturing and testing of wet-cell batteries within a remodeled 55,000 square foot manufacturing facility. The project included process cooling and exhaust systems, power distribution from three new electrical services, new lighting, power and process piping to production equipment, and building air conditioning and ventilation systems.

**Simula Safety Systems Phoenix, AZ**

Simula Safety Systems provides protective systems designs for the U.S. Government and commercial entities. TRC provided engineering design services for their design-build, fast-track relocation to an existing 186,000 square foot facility. The project included a new electrical service, new exhaust systems, a new nitrogen piping distribution system, modifications to existing HVAC systems, upgraded lighting, and manufacturing tool installations—including two autoclaves. Other projects at this facility have included a hazardous materials storage trailer and a tenant improvement for a parachute packaging room.