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WNY engineer

HELPING MAKE ESB **YOUR** SOCIETY

TECHNICAL ARTICLE

Prince Rubber & Plastics

Beginning in 1931 Prince Rubber & Plastics Co.,Inc. has expanded over the years in the field of mechanical and corrosion resistant plastic and rubber products to the point where manufacturing operations now exist in Buffalo, NY., Baton Rouge,LA. and Fort Erie,Canada. The move to highly specialize in the field of mechanical and corrosion resistant rubber and plastics sold to a wide variety of chemical processes and original equipment manufacturers has proven to be both highly beneficial to the consumer in the form of "high performance parts" and thusly success to the "Prince" group of operations. In addition to custom and specialty products in plastic and elastomeric materials, Prince further finds itself expanding its own line of specialty developed accessories for utilization in Chlor-Alkali production.

Chlor-Alkali refers to two chemicals (chlorine and an alkali) which are simultaneously produced as a result of the electrolysis of salt water brine. The most common chlor-alkali chemicals are chlorine and sodium hydroxide (caustic soda) but can include potassium hydroxide and muriatic acid. There are three commercial types of electrolytic processes used in the production of chlorine and caustic soda: the diaphragm cell process, the mercury cell process, and the membrane cell process. The process chemicals found in chlor-alkali and chlorate plants require unique materials of construction to provide corrosion resistance to these aggressive environments which typically operate in the temperature range of 80-100°C.

More recently Prince has begun developing products to extend the service life of the chlorine producing cell parts. One product development area is extension of chemical

resistance of gaskets and other desirable parts. Prince has been developing gaskets that include a bonded PTFE fluoropolymer protective liner. PTFE is a chemically inert fluoropolymer plastic and will increase part life by placing a thin film bonded to a rubber gasket along the area that is most exposed to chemical attack. It takes years of research and technique to develop this type of product. PTFE has a low coefficient of Friction, generally in the range of 0.05 to 0.20 depending on the load, thus making it difficult to bond a solid substance to it.

(Examples of PTFE Bonded EPDM Gaskets)



This development has introduced Prince to a new world of product lines and applications on a constant basis. Developments like this has promoted the addition of a 3700sqft manufacturing area to the Prince Buffalo facility and installation of new CNC equipment, rubber molding presses and rubber processing equipment.

Warren Prince has been an ESB member for over 50 years. Other Prince employees in the ESB are Victor Monter (joined 2004) and Thomas Hanshar (joined 2008).