

Customer Success - Anderson Power Products

Anderson Power Products® is an industry leader in the design and manufacture of high power interconnects and accessories. Founded in 1877, the company is headquartered in Sterling, Massachusetts, with offices in Ireland, China, Hong Kong and Taiwan. Anderson Power Products (APP) originally manufactured products to support the mining and railway industries. Today, as a result of innovative design and development, APP has evolved into a valued and unique supplier to a wide variety of industrial markets.

An ISO 9001:2000 certified company, APP has established a reputation for designing and manufacturing high-quality components, on-time delivery and excellent customer service. APP draws on more than 120 years experience in creating versatile high power, hot-pluggable, interconnected products. The company's continued success is a direct result of modern manufacturing techniques, innovative design and rigorous quality control measures.

High-Capacity Connectors and Rapid Recharging
The Electric Power Research Institute (EPRI) recognized the need for and trend in rapid recharging systems both for airport ground support use and other industrial applications. Companies like Bethlehem Steel had been forced to obtain three batteries for each of their large coil tractors, one in the truck (working), one cooling and one charging at all times - clearly a wasteful and expensive proposition. There was a large incidence of failures due to the excessive amp draw across the 350 amp battery connectors on the tractors. One facility was burning through as many as 200 connectors a week, creating huge maintenance issues and cost overruns.

APP became part the EPRI rapid recharging standards team. In fact, APP contributed greatly to the development of the standard by building prototypes of a product based on the standard and sharing these prototypes with the standards team. Several organizations, including Underwriters Laboratories and several major airports, provided input that also helped fine-tune the finished product specification. From the group's work, APP started work on bringing a higher capacity rated connector to market.

The Birth of the SBE® 700 Connector
APP used KeyCreator to help bring one of its newest products, the SBE 700 Connector, to market. A key element in any power connector is its ability to be connected and disconnected safely. The 700 was to be designed with an innovative keying system to ensure that only matching connectors could be mated. The connectors would also have to be molded in a high-impact plastic to survive in their intended operating environment.

KeyCreator was central to the design process and was part of the product evolution, allowing multiple iterations to occur quickly as engineers wrestled with various design issues. Mancini talks about how KeyCreator was vital to the iterative process used to create the SBE 700 Connector. The basic concept of the 700 was specified in KeyCreator. APP then used KeyCreator to design the manufacturing machinery needed to produce the connector. The tool room took advantage of KeyCreator to generate models of the injection molds. And finally, the team captured images to create artwork for use by the marketing and sales people.

The company has made KeyCreator the pivotal tool in its integrated product development (IPD) process. "KeyCreator is an important part of our precision engineering process because it provides a level of flexibility that is not available through any parametric-based solid modeler," says Danna Mancini, Anderson's manager of engineering services. "We don't limit the use of KeyCreator to the engineering team. Each of the product introduction teams use KeyCreator to quickly generate what they need to get the job completed."

KeyCreator can be used for both very simple and very complex modeling applications. "The interface is much more intuitive than any competing CAD product," explained Mancini. "The detailing and 2-dimensional drawing is far superior to what we see in other tools, and there are so many features we can use in both the 2D and 3D environments to streamline our productivity."

Thanks in large part to KeyCreator, the SBE 700 was designed and manufactured in significantly less time than other comparable products. Bethlehem Steel purchased 48 mated pairs of the connector, modified its coil tractors and internal operations while maximizing employee safety.

Learn more about Anderson Power Products at www.andersonpower.com