



case study



> Utility Associates, Inc.

Problem

Utility Associates (www.utility.com) of Covington, Georgia is a major manufacturer of mobile operations information communication systems, serving a \$2 billion market for automated vehicle location and comprehensive command and control systems. Their customers include a variety of large public utilities such as Allegheny Power, Con Edison, Georgia Power, TVA, OnCor, and others, as well as scores of police, fire, and other "first responder" departments.

The company's OnComm Rocket™, an advanced onboard mobile communications hub, was proving to be so popular with customers (sales had increased 100% from the prior year) that Utility was having difficulty keeping up with production requirements, particularly during demand "surges" because of the product's metal-based design. The unit's electronic components and firmware are housed in a tamper-proof lockbox that included 30 different parts, some of which were laser-cut, formed, welded, shot peened, plated, and then assembled to make one part. Several suppliers were involved. Lead times were excessive.

Solution

Utility decided that the solution needed to be one that not only reduced product complexity, but also one that would be considered a quality and aesthetic upgrade, was equally as strong as steel, and was more reproducible. One of Utility's suppliers, Versatile Mold & Design, Inc. (www.versatilemd.com) of Rutledge, Georgia, suggested IDI Composites' BMC 44-10 bulk molding compound as a solution. Utility was aware of some of the benefits of fiberglass reinforced polyester molding compounds – such as high specific gravity – because of their use in applications such as electrical circuit breakers.

IDI's BMC 44-10 is one of many IDI molding compounds that combine excellent strength and surface appearance with corrosion and flame resistance, while reducing weight (up to 35% lighter than steel parts of equal strength). Unlike metal enclosures, thermoset molded components will not become dented over time by random impacts, thanks to the excellent memory characteristics of BMC and SMC.

engineered for performance

Results

With the help of Versatile Mold and IDI, the Rocket™ was redesigned. The part count was reduced from thirty to five. Several manufacturing processes were eliminated. The supply chain was reduced from several suppliers to just two. Cost, although it was not a reason for investigating alternative materials, was also reduced. Most importantly, however, through the use of the composite material, Utility was able to more effectively handle demand surges by maintaining a much higher inventory of “kitted” parts. Although the Rocket™ was Utility's first project with IDI, the results have been so positive that several new projects are in the works.



These BMC thermoset composite parts replaced 30 metal parts that required extensive secondary processing.

IDI Composites International is the premier global formulator and manufacturer of thermoset molding compounds for custom molders and OEMs. The company provides customized polyester/vinylester-based bulk molding compounds (BMC) and sheet molding compounds (SMC) for the world's most demanding markets, including automotive/truck, electrical, appliance, food service, and energy.

IDI high-performance thermoset molding compounds are lightweight and exceptionally strong, exhibiting better strength-to-weight ratios than most metals. They are also corrosion resistant, creep resistant, and exhibit excellent thermal properties compared to engineered thermoplastic-based products.

Headquartered in a 200,000 square foot manufacturing facility and research center in Noblesville, IN (USA), IDI has a strong presence in the international thermoset composites market. To support a growing worldwide customer base, the company operates multiple wholly-owned manufacturing facilities in Europe, Asia, and The Americas.

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