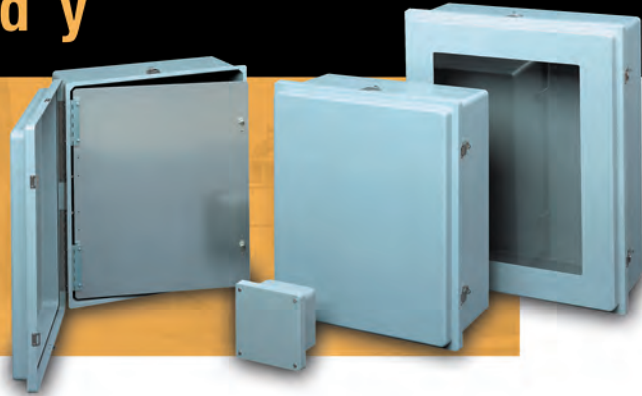




case study



> Allied Moulded Products, Inc.

Problem

Allied Moulded Products Inc. is a leading manufacturer of enclosures for electrical and hydraulic equipment. In many cases, these enclosures are exposed to highly corrosive environments in facilities such as chemical and wastewater-treatment plants, as well as outdoor locations such as golf courses. The original industry standards for these boxes were developed for metals; however, metals are problematic in corrosive environments. Stainless steel, a metal that is more resistant to corrosion than other metals, is an alternative, but its high cost drives up the price of enclosures.

Solution

Allied makes its enclosures out of thermoset composite materials consisting of fiberglass reinforcement in a polymer resin. Thermoset bulk molding compound (BMC) and sheet molding compound (SMC) maintain their structural rigidity and strength in the most corrosive environments, and are much less expensive than stainless steel. Allied utilizes both SMC and BMC for its enclosures, with SMC being used for its larger electrical enclosures, because of its higher mechanical strength.

Results

In addition to high corrosion resistance and low cost, BMC and SMC provide Allied's customers with good electrical insulation properties, which are important for electrical equipment enclosures. Thermoset components are also up to 35 percent lighter than steel parts of equal strength, and the mechanical properties of BMC and SMC help them meet a number of stringent NEMA strength requirements developed for metal enclosures. These include ballistic requirements meant to ensure that enclosures can withstand attacks by armed vandals and the chance impacts of stones and other hard objects traveling at high speeds, such as golf balls. Unlike metal enclosures, thermoset boxes will not become dented over time by random impacts, thanks to the excellent memory characteristics of BMC and SMC. Thermosets also feature UV resistance, important for outdoor enclosures, and molded-in color, which eliminates the need to paint enclosures to give them a more pleasing appearance, as well as making them less conspicuous in places where aesthetics matter.

engineered for performance

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, food service, alternate energy, and appliance.

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 facility in Noblesville, IN (USA), IDI has a strong presence in the international thermoset composites market. To support a growing customer base world-wide, the company operates multiple wholly-owned manufacturing facilities in Europe, Asia, and The Americas.



IDI's BMC and SMC composites are used to protect electrical and hydraulic equipment from corrosion and heavy impact.

www.idicomposites.com

The Americas

IDI Composites International
407 S. 7th Street
Noblesville, IN 46060 U.S.A.
317-773-1766
Fax: 317-773-3877
info@idicomposites.com

IDI Composites International
P.O. Box 400
Road #3, KM 151.8
Aguirre, Puerto Rico 00704
787-853-2186
Fax: 787-853-2187
idicomposites@coqui.net

Asia/Pacific

IDI Composites International
No. 8, Lane 275, QianPu Road
New Eastern Section of
Sonjiang Industrial Park
Shanghai, 201611 China
86-21-51096910
Fax: 86-21-67601689
rrodriguez@idicomposites.com

IDI Composites International
Shenzhen Company, LTD.
P.O. Box 107
Fucheng Industrial Park
Hongtian, Xinqiao, Sajing Town
Bao An, Shenzhen, 518125 China
86-755-27229550
Fax: 86-755-27229554
rrodriguez@idicomposites.com

Europe

IDI Composites International
Unit One, Oldbury Park
Popes Lane
Oldbury, West Midlands
B69 4RG U.K.
44-121-552-0038
Fax: 44-121-543-5377
pgarland@idicomposites.co.uk