



case study



> Berkel Company

Problem

Berkel Company, a leading manufacturer of quality slicers and mixers for the North American food service industry, was looking to enhance the design of their new X13 line of food slicers. The existing line of slicers was made almost entirely from aluminum, and research had shown that the current slicer took upwards of 90 minutes to clean. Additionally, as many as eleven possible harborage points for bacteria were found in the seams where the aluminum base and food plate "drip and drop zone" sub-assemblies were bolted and welded together. Berkel was seeking a material that would eliminate these bacteria harborage points, and enable more efficient cleaning of the tool.

Solution

Converting to thermoset composite bulk molding compound (BMC) from IDI Composites International answered the design challenge. IDI was able to provide Berkel with an aesthetically pleasing BMC, custom-formulated for the slicer. And because the entire base was transformed to a single-molded part, troublesome seams found in the previous aluminum design were completely eliminated.

The custom BMC formulation will not corrode or discolor when exposed to harsh cleaning chemicals or the acids and enzymes found in food, making them ideal for use in food service applications. The BMC material also had several other attributes that made it a superior solution to the original aluminum sub-assemblies: excellent dimensional stability, a high strength-to-weight ratio, reduced weight, flame resistance around machined parts, and the ability to mold to net shape due to zero shrink.

engineered for performance

Result

Converting the product design to BMC from aluminum contributed to a 40 percent reduction in the number of parts required for the slicer. Costs were reduced as well, because, unlike metals, the thermoset composites require no final finishing processes, such as drilling or welding, and the material itself is less expensive than aluminum. The weight of the unit was also drastically reduced, and cleaning time for the new slicer was cut considerably.

Customer feedback to the new design has been overwhelmingly positive. As a result of the success achieved by switching from aluminum to thermoset BMC for the X13 line of slicers, Berkel has plans to begin the conversion process on their entry- and mid-level product lines.



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 thermoset BMC has proven to be an ideal design solution in the food service industry, as it withstands harsh cleaning chemicals and enzymes found in food.

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