

Inside Hampel's 160,000 ft², ISO 9001:2008-certified plant, there are 10 workcenters, each supported by the latest in forming equipment as well as five and six-axis robotic post-molding CNC trim cells. Hampel uses CMMs and supporting inspection software for quality assurance.

# Problem-Solving Helps Thermoformer Grow

Growing Wisconsin thermoformer likes to solve nagging issues, especially those that save weight, with creative solutions

Sarah A. Webster Editor in Chief

ith a customer list that includes heavyweights such as John Deere, Caterpillar, Johnson Controls and GE Oil & Gas, Hampel (Germantown, WI) is a leading thermoformer

that specializes in medium to heavy gage products.

Founded in 1976, Hampel specializes in vacuum forming, pressure forming and twin-sheet forming, with an emphasis on deep draw large parts as well as cosmetic pieces. A part is defined as deep draw when the ratio of the area of the fully molded part is more than two times that of the area of the flat unmolded

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sheet. Hampel has the ability to produce parts up to 70" (1778-mm) deep, and more importantly, the expertise to do it with the skill required to achieve an even finish and proper, consistent wall thickness.

Given its skills, Hampel has a varied list of customers and products, many of which are creative problem-solvers in their respective industries.

In addition to various parts for all types of motorized vehicles and the oil industry, such as covers that protect the threads on risers used in the oil industry, Hampel has a substantial business making hutches for calves in the agriculture industry, specialized dumpster covers in the waste management industry, a mounting system for solar panels that doesn't require roof penetration and even portable restrooms.

"We've been producing 350,000 dumpster lids a year. The client came to us with a problem, which is dumpster lids tend to break along the hinge line. They take a lot of abuse," said Paul Lorge, president, Hampel. "We developed a patented twin-sheet process where we provide double thickness along the hinge line."

Another creative solution is Hampel's line of Steelspan shipping pallets, which uses a properietary process to embed steel wire within a HDPE sheet. The pallet weights 26 pounds but can support 2000 lbs (907 kg).

Reusable packaging is a substantial part of Hampel's business, and it recently designed reusable packaging for Johnson Control's automotive batteries.

## "We are always looking for problems to solve."

While problem-solving solutions are typical at Hampel, the company ultimately spends most of its time helping its heavy equipment and agriculture customers take weight out of their vehicles.

"We like the challenge of finding problems that need solutions, taking weight out is one of those areas," said Lorge, who joined Hampel nine years ago. "We're a thermoformer who understands what's going on at the front line."

Hampel has grown rapidly in recent years. Most of that new business has come by growing work with existing large customers, although it has taken on some new customers. Annual revenues are now about \$30 million.



Hampel began serving the agriculture industry in 1981 with the introduction of the Calf-Tel calf hutch and has since grown to be the world's number one choice for calf housing. Calf-Tel is the only thermoformed calf housing system on the market.

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#### The Benefits of Thermoforming

Educating customers on the advantages of thermoforming, some of which are relatively new, has also played a key role in Hampel's growth. Lorge explains that the cost of tooling for thermoforming is a big advantage these days. Because the thermoforming process requires a relatively low level of forming pressure, tooling can be constructed less expensively, often in aluminum.

Thermoforming also produces parts that are equal or in many cases superior in strength and longevity to parts manufactured out of steel and fiberglass. The various plastics available may also be lighter

in weight and will not rust-out like steel or have the inherent brittle attributes of fiberglass.

What's more, high-quality, custom colors can be infused right into the plastic sheet itself, eliminating the need for painting. Various textures can also be created in the mold, offering superior design capabilities.

Thermoformed materials are also environmentally friendly, with nearly all being recyclable.

While the price of a thermoformed part may have been an obstacle in the past, the benefits of its strength-to-weight ratio are making it attractive these days.

"We've been busy," Lorge said.

#### **Growing the Business**

The new business has led Hampel to expand the size of its facilities by 90,000 ft<sup>2</sup> (8361 m<sup>2</sup>) over the last three years, to a total of 190,000 ft<sup>2</sup> (17,651 m<sup>2</sup>).



Custom pre-colored plastic can deliver a superior finish to a final part, eliminating the need for post-production painting.



Deere and is a preferred supplier.

Hampel's facility includes 10 production cells. Two of those cells are single stations available for prototypes or limited production builds. Six of the stations are capable of deep draw processes, with half of those stations being for single-sheet operations and the other half dedicated to twinsheet operations. The remaining two stations are focused on medium draw oprations, with one station each for single and twin-sheet operations.

The cells are supported by six or seven-axis robots, including two from Kuka, or five-axis CNC trim cells with gantries.

Hampel also added 30 labor employees for a total of 50? Lorge said it was a challenge to find the right employees and the company still has a half-dozen vacancies.

"We're looking for operators that understand the equipment, are skilled with handtools and machinery, and like to understand how things work," Lorge said.

The biggest challenge Hampel seems to face, Lorge said, is the price of plastic, which is cyclical and tends to track with natural gas prices. ME

#### Want More Information?

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