

# Prized parts show thermoforming's breadth

By Dan Hockensmith  
PLASTICS NEWS STAFF

MINNEAPOLIS — A pedicure chair from Milwaukee-based **General Plastics Inc.** won the People's Choice Award in the parts competition at the Society of Plastics Engineers Thermoforming Conference, held Sept. 20-23 in Minneapolis.

The chair, built for Continuum Footspas LLC of Brookfield, Wis., incorporates a wood frame, as well as three different plastic materials — ABS, PVC and a thermoplastic olefin — for eight different parts, incorporating pressure and vacuum forming to achieve the overall function and design.

While several companies won multiple trophies, no single firm dominated the SPE Thermoforming Division parts contest. Results were announced Sept. 23.

One new twist is that the competition, which is popular among attendees, accepted sponsors this year, said parts competi-

sion's scholarship fund. Since 1999, the fund has given \$187,000 in scholarships, said Forward, national sales manager for Specialty Manufacturing Inc. of San Diego.

The contest drew 40 entries, five fewer than the record set in 2007. Parts were judged for creativity, originality, design complexity, surface finish, secondary operations, technical difficulty and innovation.

**Stampede Products** of Camanche, Iowa, won the Judges' Award for its two-person Tuff-brand hunting blind. The 5-foot by 5-foot collapsible structure, made of ABS, comes in various camouflage patterns and features three-position windows.

The competition's Multipart Award went to thermoformer **Plastic Design & Manufacturing Inc.** of Wadsworth, Iowa, for a streetlight fixture for Oxford, Mich.-based Relume Technologies Inc. The fixture assembly consists of LED modules bonded to an aluminum chassis. A thermoplastic olefin skin covering the chassis was extruded by PMC. LyondellBasell Advanced Polyolefins provided the TPO.

**Spencer Industries Inc.** of Dale, Ind., won the Twin-Sheet Award for an end support column for a tanning bed. Formed from recycled ABS substrate, each end piece is urethane foam injected for stability and sound deadening, with formed cavities for audio speakers and other electronics.

Here are the other award winners:

#### ROLL-FED INDUSTRIAL

**PWP Industries** of Vernon, Calif., took the gold for its tamper-resistant Spork tub. The plastic food container, made from recycled PET, features a fork built into the lid. The tub's tamper-resistant lid eliminates the need for PVC or polypropylene shrink bands or shrink wrap.

PWP also took home a silver award for a pair of two-part PET products: its tilted Display-Pak cake holder, designed to emulate clamshell packaging for square, rectangular and multisided cakes; and the Twist-Top package for round cakes. The Display-Pak is molded so that once the package is open, the top piece can be lifted off without touching the cake's sides.

Shepherd Thermoforming and Packaging Inc. of Brampton, Ontario, took the bronze for its Kia Spectra oil filter.

#### ROLL-FED MEDICAL

A syringe tray made by **Plastic Ingenuity Inc.** of Cross Plains, Wis., won gold in the roll-fed medical category. The multisyringe tray is thermoformed of glycol-modified PET and high-impact polystyrene. The design and manufacturing eliminate sharp edges that can result in the tearing or puncturing of medical devices packaged in plastic pouches. The tray's smooth edges also minimize tears to rubber gloves worn by medical personnel handling them.

Silver and bronze awards in the category went to **Prent Corp.** of Janesville, Wis., for its trays for bariatric and urological devices. The bariatric product is a nest of 10 trays and retainers for catheters, in different colors to help medical workers find the right equipment. The Flexor Vision tray, for Cook Urological Inc. of Spencer, Ind., has a thermoformed clamshell nested on top to provide protection for long, thin sheaths and scopes for endoscopies.

#### CUT-SHEET THERMOFORMING

**Freotech Plastics Inc.** of Fremont, Calif., won gold for a deep-draw surgical housing with multiple undercut requiring a multi-sided tool and sophisticated plug assist.

The category's silver award went to **Profile Plastics Inc.** of Lake Bluff, Ill., for the shell of the HX2 wearable inventory-control computer marketed by LXE Inc.

Freotech also came away with a bronze for an in-flight display housing for the Airbus A380 passenger airliner. The lightweight housing, formed of Kydex thermoplastic sheet, has molded-in color and meets new international standards for fire resistance in aircraft.

#### CUT-SHEET VACUUM FORMING

A gold award was given to **Kal Plastics Inc.** of Vernon, Calif., for its Oasis seating/lobby bench. The bench, designed to mimic shapes on a windswept beach, is formed in two parts from Spartech's WeatherPro ABS/alloy weatherable sheet. Using two male molds, designers were able to develop a process of inverting the molds and using the upper platen to solve problems of assembly. The Oasis is marketed by Peter Pepper Products Inc. of Compton, Ca.

**Plastilab Technologies** of Quebec City, Quebec, won silver for a seat for Boréal Design's Sedna kayak. The seat, made of recycled polyethylene with an additive for ultraviolet-light resistance, has two back rests. It is designed to be thermoformed in a three-station rotary and trimmed on a five-axis computer numerically controlled machine.

**Plastics Unlimited Inc.** of Preston, Iowa, received a bronze for a hood for farm and construction equipment for Bobcat Co. of West Fargo, N.D.

#### STUDENT AWARDS

Students from **San Jose State University** in San Jose, Calif., swept the contest.

Jessica Lambert won first place — and \$2,500 — for her sprout-holder vase thermoformed from PS sheets measuring 2 feet by 2 feet. Turned wood molds were used to make the halves, featuring cuts for seed placement.

Julia Cooke received \$1,500 and second place for a dog crate for a medium-sized dog. The crate was designed to blend into the home where it is used.

Jeffrey Greger took home third place and \$750 for a one-fifth-scale model of a cargo holder for the Toyota FJ Cruiser SUV. To facilitate loading of snowboards, the carrier



**TWIN-SHEET AWARD**  
End support column for a tanning bed  
Spencer Industries Inc.

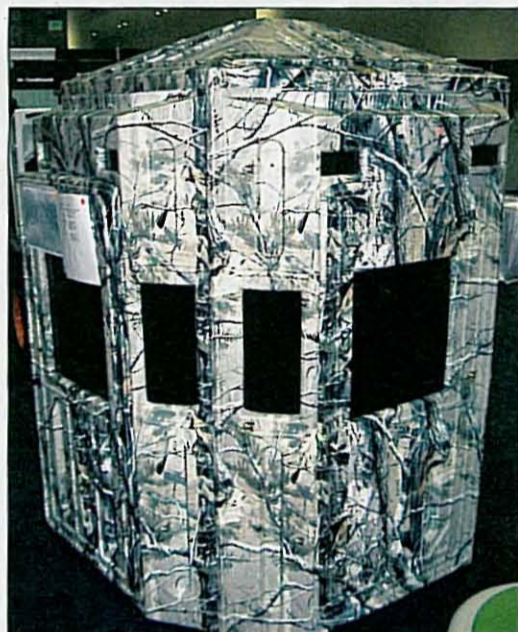


**CUT-SHEET VACUUM FORMING**  
GOLD AWARD  
Oasis seating/lobby bench  
Kal Plastics Inc.

is formed from three pieces. The middle piece is attached to the bottom half of the carrier, while side pieces hinge off the center like wings. The model was formed of two sheets of PS in hand-shaped molds.



**PEOPLE'S CHOICE**  
Pedicure chair  
General Plastics Inc.



**JUDGES' AWARD**  
Two-person Tuff-brand hunting blind  
Stampede Products

tion Chairman Haydn Forward.

"I was approached this year over whether we would allow sponsorships for the parts competition. It was a dicey proposition — commercialization [of the awards] and all that," Forward said at the awards ceremony. "We have accepted sponsors, but all of the money received is not going into the general or the conference fund. We decided to put it entirely into the scholarship fund."

Sponsors Kleerdex Co. LLC of Bloomsburg, Pa.; Premier Material Concepts of Findlay, Ohio; Primex Plastics Corp. of Richmond, Ind.; RTP Co. of Winona, Minn.; and Spartech Corp. of Clayton, Mo., each donated \$2,500 to the thermoforming divi-



## Back to basics



Betty Coleman, above left, outreach director for the National Plastics Center in Leominster, Mass., and PlastiVan staffer Margie Weiner, demonstrate basic plastic thermoforming principles to eighth graders from Minneapolis' Annunciation Catholic School, left. The PlastiVan demo took place Sept. 22 during the Society of Plastics Engineers Thermoforming Division Conference in Minneapolis.