



ShepherdReport

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Message From Barry Shepherd

There is a lot about the thermoforming industry that makes me feel very good these days. I recently returned from a meeting of the SPE (Society of Plastic Engineers) Thermoforming Division Board of Directors in California, where we had 3 full days of highly productive meetings. SPE is a non-profit organization made up of industry professionals who volunteer their time and talent to the cause of advancing the industry through education and shared ideas. I have been on the board for 6 years and was recently elected Vice-Chair. My job will be to help direct the \$100,000 in scholarships, equipment grants and educational programs in North America for the thermoforming industry. Primary funding is provided by the annual Thermoforming Conference to be held this year in Nashville in September of 2006. You can learn more about this very progressive organization by referring to the SPE website at www.thermoformingdivision.com.

On the home front at Shepherd Thermoforming and Packaging, technology is also on the forefront as we investigate new approaches to maintain our competitiveness in the marketplace. The article in this edition on biodegradable plastic made from corn is an example. A very big issue for us these days is our success in the manufacturer of plastic pallets to transport seats on the production line in the automotive industry. It is our feature story on the inside of this

newsletter. You will also meet Kari Malmstrom, who is our main point man for this industry.

The other big news is that we purchased a new building in Brampton, Ontario to accommodate our increased manufacturing needs. We make the move after December 15, 2006 and will provide more details in the next issue of the Shepherd Report. Also, please visit our brand-new website www.shepherdthermoforming.com to get an update on all of our capabilities. In the meantime, we are always happy to quote on your requirements or to answer any questions about possible applications of thermoforming in your industry.

Barry Shepherd
President



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Shepherd Engineering - Up for the Challenge!

Deep in the heart of the Shepherd manufacturing sector is the office compound that houses our elite engineering group. On the surface of course, these are ordinary people like you and me. They are mostly family men who like to play golf, hunt or fish, go on yearly vacations and play poker with the boys on Friday night. They laugh a lot together, but are all business when it comes to creating unique solutions to challenging applications that the sales group bring to their desks. Whether working on a new model of pallet for an automotive seat manufacturer or developing a plastic container for the beekeeping industry, our guys are up for the challenge. We have a myriad of success stories from this department. Yours could be the next!

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Shepherd Automotive Seat Pallets

Shepherd Automotive Seat Pallets Solve Industry Problem



It is no secret that automation is the only real answer to increased productivity and lower costs in the automotive industry. As a leader in technology in the thermoforming field, Shepherd was called upon by a major auto parts supplier to solve a costly production problem. The plastic pallets used for final assembly, automatic sequencing and shipment to the assembly lines were warping, causing jammed conveyors and shutting down the material handling equipment. Our first step was to work closely with engineers at the plant to fully assess the problem. The Shepherd engineering group solved the challenge by changing the plastic material to a more stable resin and redesigning the pallet to run smoothly on the conveyors.

That was 10 years ago. Since then we have been asked to design and supply pallets for a number of automotive seat plants in Mexico, the U.S. and Canada. We visit each plant and review the

processes and environment in which the pallets are used.

Returnable metal pallets have been used for automotive seats and other sub-assembly transfer in the past. Why switch to plastic when metal pallets are so durable and accurately locate the seat for handling by robots and manipulators? Simply because metal pallets create some specific problems: they have a high initial cost, are heavy, can cause damage to the conveyor lines and are very noisy. Thermoformed custom plastic pallets from Shepherd are much less expensive than metal, are much lighter, are much quieter as they travel on the conveyor lines, and cause no damage or wear to rollers side rails and other material handling equipment.

Shepherd pallets are made with flat bottoms, large radius corners and detailed top surfaces that can be detached from the bottom section in the event of a design change.





Hinged and tethered knock-down features are used where necessary. The pallets are designed to be stronger in areas in contact with handling equipment. If replacement is required the cost is minimal.

Timing is always critical when finalizing the design of a custom seat pallet. The seat itself is undergoing final modifications just



prior to pre-production approval which usually means the pallet will also change. It is through the benefit of in-house design and tooling that Shepherd engineers are able to adjust and make last minute changes and still meet the time line for the project.

We end this piece at the beginning, where automation and manufacturing are the key factors in the competitiveness of North American automotive parts plants and assembly lines. At Shepherd we have marshaled our 10 years of learning and experience into a formidable team of experts in the automation of automotive seat pallets. Our complete control over in-house design and tool making has been a key element in this success. If, as an automotive seat manufacturer, you send us a CAD file, we will immediately understand them and will make full use of the data in the design of the pallet. We are always happy to be put to the test.

Meet Kari Malmstrom

Kari Malmstrom has spent most of his working life (25 years) in the vacuum forming industry, latterly on the sales side for Shepherd. He credits his manufacturing and design experience as a big plus in being able to quickly assess customer needs and come up with practical thermoforming solutions.

A man of many interests, Kari is a certified scuba diver, plays hockey, baseball and golf. He also loves to fish. His greatest passion (other than thermoforming!) is Motorcycle sports - specifically motocross and ice racing. Kari owns one antique motorcycle and a few racing bikes. He says nothing beats the thrill of challenging glare ice on a motorcycle at 120 km per hour. We'll take his word for it! Born in Helsinki, Finland, this outdoorsman has a cottage in Parry Sound, Ontario



on Rankin Lake. Kari studied Mechanical Engineering at Seneca College in Toronto. He lives in Brampton with his fiancé and children and has been with Shepherd Thermoforming for five years.

From the Funny Bone

Bernard, who was noted for his gracious manners, was awakened one morning at 4:30 a.m. by his ringing telephone.

"Your dog's barking and it's keeping me awake" said an angry voice.

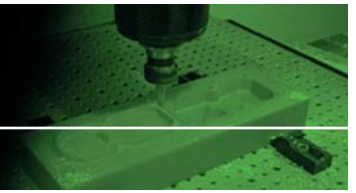
Bernard thanked the caller and checked the caller ID to determine which neighbour had called.

The next morning at precisely 4:30 a.m. Bernard called his neighbour back.

"Good morning Mr. Williams, just called to say that I do not have a dog".



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Biodegradable Plastic - New/Old Kid on the Block

Polyactides (PLA) are plastic resins made from corn and are produced by Cargill Dow (Natureworks™ PLA) in the U.S. Maize (corn) is basically pumped up grass which bears a spectacularly large seed. Early Indians called it “the stuff of life”. Little did they know that later age technology would incorporate the “stuff of life” into almost every phase of our daily living - including light gauge plastic containers and packaging. Plastics made from vegetable products are unlike current packaging materials that are made from non-renewable fossil fuels, in that they are fermentation based. These “plastic products” are a good fit particularly where the applications end up in the ground where composting takes place naturally and some deformation during use can be tolerated.

As a technology leader in the field of thermoforming, Shepherd has tested PLA in packaging applications. As a clear plastic material PLA looks and forms like PET. It performs just as well as PET for rigid clear packaging except where the ambient temperature goes above 40 degrees Celsius. The 40 degree Celsius (110° Fahrenheit)

limitation obviously precludes the use of PLA for many applications where temperature is an issue, but the industry is continuing to experiment with and evaluate additives to improve the melt strength of PLA.

We see the work being done in the field of polyactides as a valuable contribution to the reduction in the

consumption of fossil resources, the elimination of a net source of green house gas (CO²) and a reduction in municipal landfill volumes. Shepherd will stay on the leading edge of this technology as the horizon for its use expands. Natureworks™ PLA is the leader in producing plastic from renewable resources.



Response Corner

Can we be of help? Do you have a question about our technology or policies or require a quotation? If you do, please send your request to Todd Shepherd, Vice President of Sales, e-mail todd@shepherd.ca and you will get a prompt response.

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