The Journal

Winter 2015
Volume 6
Issue 1

Product Design and Development Division

Newsletter

Editor's Desk

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My Two Cents Worth

Brandon Lee

With the winter ending, people are beginning to do the traditional spring cleaning. Out with the old and in with the new, but where do you put the old? 50 years ago one would have simply tossed the old stuff into the trash. Now there are so many options for disposal of goods: composting, recycling, donating, trash, etc. When it comes to recycling you have e-waste, plastics, aluminum, paper, corrugated, etc. So out with the old is not so simple for the environmentally conscience.

How, as designers and engineers, can we make this process easier for people? The plastics industry has been labeling plastic packaging, which makes recycling easier, but not all plastic products are labeled.

Designers and engineers know about product lifecycle, but usually it is applied to getting the product to market. Seldom does product lifecycle consider where the product goes at the end of product life. There are exceptions though. I own a Canon copier. When I purchase a new toner cartridge, the box is reused to send the old cartridge back to Canon where, I assume, the old cartridge is recycled. This is an example of a company considering end of product life.

So, what can you do to make products you design easier to dispose of when they are obsolete?

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This issue of The Journal is focused on the up coming ANTEC/NPE event this March. We have an article describing why ANTEC and NPE are together in a single event as well as an article outlining the PD3 offerings at ANTEC/NPE. Also we have a special memorial dedication to Patsy Beall, dear friend and member of the SPE, who passed away this past November of 2014.

Finally, I hope you will have an opportunity to attend the ANTEC/NPE event to learn about new plastics and processes, catch up with old industry friends and acquaintances, and make new connections.

I wish you well.

Brandon Lee
Editor-in-Chief
pd3.quarterly.editor@live.com
PD3

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President's Desk

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President's Message for Fall, 2014 PD3 Newsletter

Al McGovern

Greetings to all from the Product Design and Development Division (PD3) President's Desk!

It's wintertime in Chicago, which means cold, gray days and long, cold nights. And, snow, of course. But, for a few days in March, I'll be able to trade all that for the warmth of Orlando, Florida, while I attend the joint NPE/ANTEC shows. I am always excited to attend NPE, as it never fails to deliver some AH-HAH moments with spectacularly complex molds and enormous molding machines. When the show was in Chicago, I could always count on taking home a car full of molded samples, many of which I still have and use at home today. That's a bit tougher to do when flying, and even more so with all the baggage restrictions. It's still worth it to see this show, and it's an even better deal now that it's combined with ANTEC!

So, pack your bags and set your sights for Orlando. If you can, why not make it a family event and extend your stay into a warm weather vacation. You're never too old to go to Disneyworld and Universal Studios, just to name two of the many terrific destinations in and around Orlando. But, do come for your professional growth, and do let me know if you'll be there and if you are interested in joining our growing SPE division. Speaking for my fellow Board members, we know enough to know that we don't know enough to know everything about plastic part design! If you can understand that, then you're just the type of person we're looking for! Come by our Board meeting on Tuesday, March 24th, at 5 PM in Room S322.

Whatever you choose, I wish you peace and happiness in all you do,

Al McGovern
Naperville, IL
+1-630-660-6217
albert.mcgovern@gmail.com
PD3

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Board of Directors Meeting, December 10, 2014

David Tucker

Meeting Attendees:

- Albert McGovern
- Ed Probst
- Mike Lacey
- Mark Maclean-Blevins
- Larry Schneider
- Barbara Arnold-Feret

Reports:

Treasurer's Report: Larry

- Below image is the current Balance

- ACTION: All Board Members should review the numbers below

Date	Income Dividend	Deposit	Withdrawal	Balance	Withdrawal Description
07/01/14				60,167.06	
07/28/14		929.06		61,096.12	SPE Rebate
08/01/14	0.51			61,096.63	
09/16/14			(1,142.16)	59,954.47	Councilor Travel - Mark MacLean-Blevins
10/09/14	1.02			59,955.49	
11/22/14			(331.01)	59,624.48	Patsy Beall Honorary Membership Dinner to SPE
11/26/14			(1,000.00)	58,624.48	PPA Plastics Collection @ Syracuse (Patsy Beall)
11/26/14			(143.75)	58,480.73	Flowers for Patsy Beall
				58,480.73	
				58,480.73	
				58,480.73	
				58,480.73	
				58,480.73	
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				58,480.73	
				58,480.73	
	1.53	929.06	(2,616.92)		

Councilor's Report: Mark MacLean-Blevins,

- No council activity to report. Mark has been asked to sit on the SPE Nom Comm. and working to fill slate for Exec. Comm. Only 3 pos to fill and only 3 candidate.

- ACTION: Mark looking for additional candidates so please email him.
- ACTION: Al McGovern to follow up with Mike Paloian.
- ACTION: Mark to prepare request for PD3 membership to solicit more candidates

Membership Report: Jeremy

- Membership Report: Jeremy Braaten (traveling in China)
    - New Member Recruiting Brochure Update

- ACTION: All board members are asked to review it for errors and try the QR code to make sure it scans correctly

Newsletter Report: Brandon Lee

- Next Journal Issue--Spring/ANTEC

- ACTION: Ed P to submit article on Robert Cramer Scholarship winner
- ACTION: Rich Freeman added to Committee
- ACTION: Include mention of Patsy Jo Beall's passing in next newsletter--up to Glenn?

Website Committee: Albert, Brandon, Mark MacLean-Blevins, Mike Lacey

- Use of outside website creation and hosting service for PD3 site (not microsite)--progress being made!
- Wix.com will be hosting site
- Need to agree on defining content
- Website editor needed

- ACTION: Ed to call meeting for the next board meeting

TopCon Committee: Ed, Mike Lacey, Lance, Michael P, Eric, Glenn (consult)

- Update on plans for next TopCon

- ACTION: Ed to call meeting for the next board meeting

ANTEC Committee: Mike Lacey, David, Al, Eric (consult)

- Board Meeting at ANTEC
- Open PD3 Meeting at ANTEC

- ACTION: Al McGovern to send out a email to all Board members to finalize a meeting day and time
- ACTION: Mike Lacey to send Al McGovern notice of reservation dates by SPE

Old Business:

- Review Action Register

Adjourn

Next Meeting:

- To established by email.

David Tucker
PD3 Secretary
PD3

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Board of Directors Meeting, February 11, 2015

David Tucker

Meeting Attendees:

- Al McGovern
- Ed Probst
- Lance Neward
- Eric Larson
- Larry Schneider
- Jeremy Braaten
- Mark Maclean Blevins
- Mike Lacey
- Brandon Lee
- Glenn Beall

Reports:

Treasurer's Report: Larry Schneider

Date	Income Dividend	Deposit	Withdrawal	Balance	Withdrawal Description
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11/26/14			(143.75)	58,480.73	Flowers for Patsy Beall
01/05/15		929.06		59,409.79	SPE Rebate
01/13/15	1.50			59,411.29	
				59,411.29	

Councilor's Report: Mark MacLean-Blevins,

- Next Council meeting will be the Saturday and Sunday before antec. Full report to come after Meeting.

Membership Report: Jeremy

- New New Member Recruiting Flyer for Antec is below.
    - Items to be included on the back of the PD3 Membership Flyer
        - Presentation location and times

- For Postcard size, Flyer should be ran through SPE Staff. They can help out with the
  - People to contact would be: Kathy Schacht and Kim Wakaluk
- QR Code is working.
- Total Printed Estimate of 500
  - Antec, should print out about 150 based on attendance and take rate.
  - NPE, place between 50 and 100 at table
  - SPE booth at Antec

- Flat membership growth: 192 New Members, and roughly the same amount leaving.
- Potential to add forum on to website to assist in driving membership growth.

Committee Discussion

Newsletter Report: Brandon Lee

- Next Journal Issue--Spring/ANTEC
- Winter 2015 - To be released

    - David Tucker to Proofread the Newsletter
- Include mention of Patsy Jo Beall's passing in next newsletter
    - Larry to send something to article text to Brandon Lee
    - All other statements should be sent for Reflections Section
- Mark Maclean Blevins to send Antec times to Brandon

Website Committee: Albert, Brandon, Mark MacLean-Blevins, Mike Lacey, David

- Website Committee: Al, Brandon, Mark MB, Mike Lacey
    - Website format placeholder is http://ereihl4.wix.com/spe-pd3
    - Content is to be supplied by Committee
    - David Tucker will be the Website Editor.
    - Al Mcgovern to Set-up follow up meeting.

TopCon Committee: Ed, Mike Lacey, Lance, Michael P, Eric, Glenn (consult)

- Next topcons will be scheduled after Antec 2015.
- Target is Fall 2015.

ANTEC Committee: Mike Lacey, David, Al, Eric (consult)

- Paper submittal Updates
    - Some papers have been withdrawn from presentation
- Moderators will be Albert Mcgovern, Mike Lacey and Mark Maclean Blevins.
- Should we pursue CAD User groups, Additive Mfg SMEs, etc.

New Business:

- Pinnacle Silver Award winners for 2 years in a row
- Board Meeting at ANTEC--Tuesday, 3/24, at 5 PM
- Open PD3 Meeting at ANTEC, Guests are welcome.
- Mark Wolverton--HSM Honoree!
- Sunday Awards Luncheon--finalize attendees
- Barbara has a proposal from the Chicago section on a minitec for 3D printing
    - Ed Probst and Albert McGovern will follow-up with Barbara
- Potential contribution to the SPE Student Activities Section
    - $750 Contribution from PD3
    - Mark Maclean Blevins to send email to Larry Schneider

- Eric Larson items
- 4:30 timeslot for PD3 General Business Meeting at Antec

Old Business:

- Open Issues / Actions Register
    - Albert McGovern and David Tucker to meet to review how to integrate.

Next Meeting:

- Next board meeting will be tuesday March 24th
- Early May and Late June for next meetings.

Adjourn

David Tucker
PD3 Secretary
PD3

Membership Desk

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September 2014, Status

Jeremy Braaten

A few questions that I have been asked by designers and design leads is, “How can I grow my knowledge of designing plastic products?” or “Where can I find more information about developing plastic components?” My answer to this is the Product Development and Design Division. Being a part of this organization gives you access to many different ways to get great information for developing and designing your next plastic part (or parts) or understanding the requirements that a tooling process has for a specific design.

I am guessing that right now you are asking, “What are the ways to get more information about developing and design plastic parts?” The PD3 Division will have soon a great new website that can direct you to different avenues to get this information. Some of our industry leaders have written articles in different fields of plastic that can help you build your knowledge with certain processes or aspects of component development. The PD3 website also has a link called “Consultant’s Corner” that gives you access to other experts that can guide you along. Being a member of PD3, or any of SPE’s divisions, gives all of us the great ability to build a professional network that we can learn from. I personally have had the ability to use networking to help me grow our industry.

Currently, over 19% of PD3’s members are new to this division this year. this is great news! With this, I want to encourage all of our members to utilize the resources that we have available to help us grow in our knowledge and expertise in our industry.

Sincerely,

Jeremy Braaten
Membership Committee Chair
PD3

Mentor's Corner

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Concept Development– The Second Step in Design

Michael Paloian

Hello again my fellow designers, inventors and plastics experts. This is my second editorial pertaining to product design based on plastics materials and processing. The first article focused on defining product specifications, which established a baseline and set of objectives defining the product. Without a well-defined set of objectives and product specifications, it is virtually impossible to design any product. After the product has been defined based on requirements, a schedule, and budget; creative thinking must be harnessed to begin the design development process.

The transition from research, information gathering, analysis and organization to creative thinking is not easy. As matter of fact, some people are really good at analysis and research, but are terrible problem solvers, lacking the ability to creatively solve problems; the reverse is also true. Since the skills for each are so different, these tasks are often assigned to specific individuals during a project. During my 40+ years designing hundreds of products, I've met thousands of people with varying skill sets. Some were extremely talented in organizing and analyzing information but couldn't figure out how to design a glass to hold water if their life depended on it. Those that had good people skills were often managing the project. Then there were the oddballs who were often socially awkward, somewhat disorganized but were extremely creative. These were the people who provided the energy and ideas which paved the pathway to the final product. On rare occasions I also encountered people with skills in both realms. Outstanding designers possess equally balanced skills in analytical thinking, organization and creativity.

Developing innovative concepts is the magic every designer has to offer. The level of creativity and innovation is unique to each individual's personality and talents, which makes this special quality mystical. Creativity is based on each person's perspective and creative insight, which can be thought of as his or her identity stamp. I believe this is the most important talent anyone can possess as a designer since human creativity is solely

responsible for every manmade article ever created. Creativity and concept development are interdependent and inseparable. Since creativity is so critical to developing concepts, I would like to discuss this aspect of design in further detail.

Before I discuss creativity and its relationship to developing concepts, I'd like to make a statement that some may disagree with. I don't believe creativity or creative thinking can be taught. You are either born with it or you missed out. I know there are inspirational speakers who travel around espousing their own methods which can supposedly make everyone a creative genius, but I think these are simply gimmicks. Conversely, I do believe you can improve your creative thinking, but it's not easy. I believe a high level of creativity requires a number of traits including high intelligence, a high level of curiosity, uninhibited thinking, broad knowledge and the ability to connect diverse bits of information to common focal point. The most significant of these traits affecting creativity is unbounded thinking, otherwise referred to as being uninhibited. Inhibition blocks your ability to comprehend information and connect diversely unrelated facts, which could lead to an innovative solution, which is why most creative individuals are considered oddballs. An uninhibited person will also most likely be very curious and observant. These traits typically lead one to inquire, thus expanding his or her knowledge base. This broadened perspective, combined with an ability to synthesize new concepts based on unrelated facts without filters, is the creative process.

All great concepts share one thing in common, simplicity. It's easy to conceive a complex concept, but it's very challenging to derive a simple design. The paths to deriving an innovative concept can take any path ranging from a simple napkin sketch to a refined machined model. Developing concepts is simply the first step in interpreting an abstract idea into a physical form, which is highly dependent on the individual and their perspective of the product definition. This statement may be easily overlooked but it cannot be overly emphasized. One's perspective of the product originates with their personality as well as their professional background. For example a manufacturing engineer will be more interested in how efficiently a part will be molded than how it will function or look. A marketing specialist on the other hand will be more interested in overall appearance than how fast it can be molded. Industrial designers are typically focused on appearance, ergonomics, and color; verses tool design. Plastic part designers of course are highly concerned about structural

integrity, ease of molding and overall performance. Therefore each person may approach the same product with a totally different perspective and concept. Skilled and talented designers are able to absorb these various perspectives and weave them into a balanced solution, which optimizes the product from all perspectives.

Concept development is a thinking process during which ideas are explored in groups or individually. Paths to developing abstract thoughts will vary depending upon the problem to be solved. Mechanism concepts, for example, might begin with a sketch, a cardboard model or a simple CAD model. In some cases the material may play a significant role in developing an idea, in which case the model may be machined from the actual material. In other cases a number of moving parts may have to be developed to verify a particular motion. These concepts can be modeled using computer simulation or simplified physical models. Concepts are also essential for defining how a product might be embodied. A concept could define a product as a module within a larger system, enabling it to perform different functions depending upon its configuration. In other cases concepts may be developed for features within a part as it is being detailed. These features could require a part to be molded as a single complicated part with a complex multi-part tool or multiple parts, which are molded in individual molds. Concept development and selection provides the foundation for a product and will have a dramatic effect on its success or potential failure. Products are ill conceived because they are too complicated, unreliable, ugly, and dangerous, or simply forgot about the most important objective, satisfying the end user.

I don’t believe good designers implement the first idea that comes into their head. Really good designers strive for elegance and simplicity in their concepts. No one can refute the fact that a simple solution is the best solution. Simple solutions typically require fewer parts, are more economical and are much more reliable. Simplicity is not easily attained and is always obvious after the fact. It’s never obvious when you are staring into space trying to come up with a simple concept.

I can’t emphasize the importance for designers and engineers to play and physically engage with materials during concept development. Yes, 3D CAD and simulation software are vital tools for designing; however there is a magical quality of simply rolling up your sleeves and making something. There have been many occasions in my career where I have hit a brick wall

working at a computer or sketching something. Suddenly I would go into the shop, pick up a piece of plastic or wood or cloth and make something, after which a spark of light would instantly pop into my mind solving the most complex problems. Sketching is another highly valuable skill that is rapidly losing out to CAD. A dozen sketches can be created in less time than one simple CAD model. Sketching provides you with an immediate visualization of abstract ideas on paper. A designer who can sketch out his or her ideas will outperform any CAD jockey.

I'd like to make one last comment about creativity and concept development. This comment pertains to accepting ideas from others. If you are stubborn, egotistical and insecure, guess what? You will never think anyone else's ideas are any good and you are most likely a one-dimensional less than average designer. I have met many designers with this personality trait. Conversely, great designers are smart enough to absorb and integrate good ideas from their peers and integrate them into their own design interpretation. The great part of design is sharing ideas and exchanging different perspectives of the same topic. Creatively weaving these colorful thoughts and concepts into a tangible product is what makes product design so exciting.

Next time you sit down to develop your next product, think about the importance your concepts will have on the final outcome. Explore as many options as time permits, with the objective of deriving the simplest, most elegant solution. I suggest you perfect the art of listening and synthesizing the bombardment of ideas tossed at you into a symphony of innovative concepts based on your individual talents.

Michael Paloian
PD3 Mentor
PD3

Gallery of Goofs

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Concept Development– The Second Step in Design

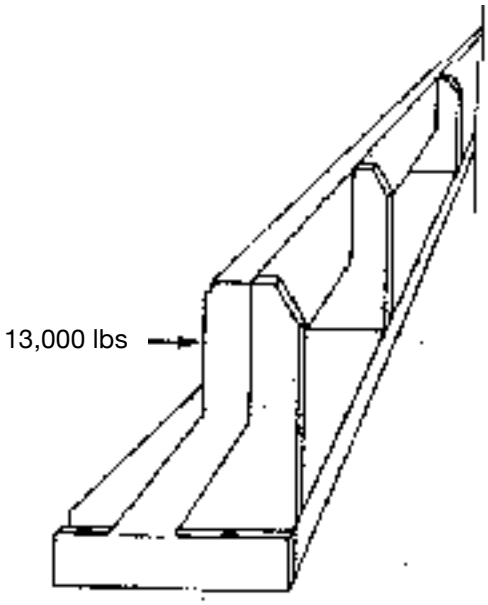
Russ Malek

Considerable time was spent in calculating the stress at the most critical points on an insulation device for a subway system. The thermoset material supplier's charts were checked for tensile, flexural and compressive strengths, modulus and so forth. Calculations were checked and double-checked.

Prototype molds were built, and parts were tested. The initial parts failed at values as low as 4800 psi, far below the 13,000 psi required. What had gone wrong?

Some veteran plastics technicians insist that published strength values should be divided in half for purposes of calculating end-product strength. These numbers are obtained, as a rule, from test specimens in a laboratory, and the orientation are quite different to that found in most plastic parts. The real-world performance of plastic materials is often quite different from the published data.

In this case, the molder was having reinforcement orientation problems. The strength is not the same in all directions when glass reinforcement is used, or when materials are used that are particularly sensitive to flow direction. After some testing, a technique was found to orient the fibers to achieve the final 16,000- to 18,000-psi strength.



Moral. You cannot ignore the effect of processing on a material’s properties and still expect good parts.
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Article

The Eyes Have It

Eric R. Larson, PE

"seeing" things from a different perspective

The way I see it.
Let me take a look.
See what I'm saying?
A vision for the future.
Oh, NOW I see.

Literally, seeing is about perceiving with our eyes. Figuratively, it means to understand. To comprehend something that may have been obvious, but not previously within our experience.

I was a nearsighted child. With glasses, the optometrist easily corrected my vision to 20/20. The corrections have been adjusted as I've aged. I now use a separate pair for distance, reading, and seeing what is on the end of my fork.

I've considered laser eye surgery, but I like wearing eyeglasses. I even collect them. I have more than a dozen pair. Near field, far field, tinted, photo-sensitive, stylish, crude, comfortable, protective, sporty. Colors and frame styles to match my mood and wardrobe. Even a rose-colored pair. (Seriously.) Enough pair that when I misplace one, I am always able to find another so that I can see.

And every time I put on a different pair, how I see – and what I see – changes slightly. Sometimes it's about what I can see through the lenses. Others it's about how people see me – and they how interact with me. The net result is that I experience the world around me differently.

As a designer, I am always looking for a fresh perspective so I can create better design solutions. To bastardize a phrase: To understand how others see you need to walk a mile in their… er, glasses.

I sometimes offer different pairs of glasses to my clients to get them to see things differently – to notice new details, or alter their perceptions of color, movement, or texture.

Everyone does the same thing. They put the glasses on for a few moments, look around the room, remark on how much correction my lenses have, then take them off again to continue the conversation.

They missed the point.

Truth is, someone else's glasses can be uncomfortable. Frames don't fit our nose or ears. They may hurt our eyes or so distort our vision so much that we trip over furniture and run into doors. Many dismiss the exercise as just silly. But that's what wearing someone else's glasses requires.

The next time you're engaged in a design problem, grab or borrow a different pair of glasses. Put on a pair of reading glasses, sport goggles, smudged or scratched glasses, thick glasses, sunglasses - and then see what happens.

It's not about the glasses. It's a simple method for empowering yourself to look at the world around you in a different way. It will not only change how you use the phrase "I see" – it will make you a better designer.

Seems simple, but seeing is often more difficult that it appears.

See what I mean?

P.S. I love simple techniques like this. I often use them with my team and my clients so we can view the problems we are trying to solve from the persceptive of the user that faces them. Invariably, that perspective helps us frame the true problem that needs addressing, or faciitates a creative leap from a design that simply meets the specifications to one that truly meets a need.

Eric R. Larson, PE
PD3 Contributor
PD3

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Designers' Corner, Rotational Molding, Part 12

Glenn L. Beall

REINFORCING FEATURES – PART 2

Editor's Note: This is the 12th in an ongoing series of articles on design guidelines for rotationally molded parts. These articles are written by Glenn Beall, a Past Chairman and one of the Founders of SPE's Rotational Molding Division. He has been designing rotational molded parts since 1963.

This is the second of three articles that discuss techniques for providing increased strength on thin-walled rotationally molded products.

The rotational molding process is noted for its ability to produce closed, hollow parts. This is an ideal attribute for play balls and floats, or tanks and containers that require only small openings.

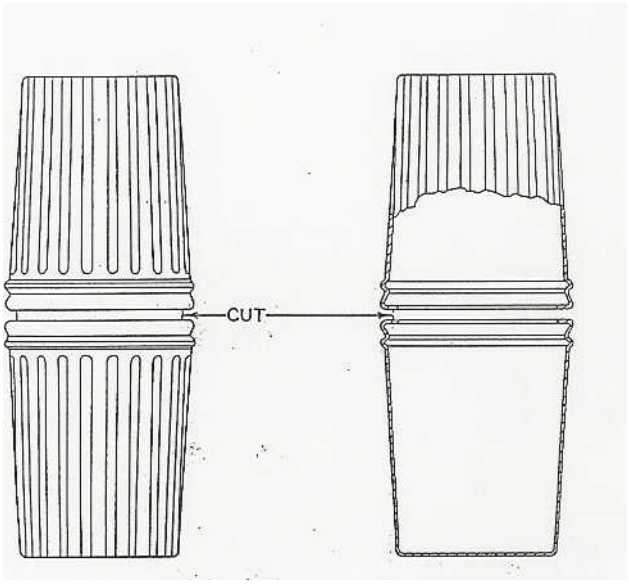

Figure 1

There are, however, large quantities of open-topped tanks, drums, containers, and other products produced by rotational molding. It is a common practice to mold a long, cylindrical, or square part that is cut in the center to produce two shorter containers open at one end. The two refuse

containers shown in Figure 1 were produced using this technique. It is even more common to mold a tank of the required size and then cut a large opening in one end (Figure 2A)

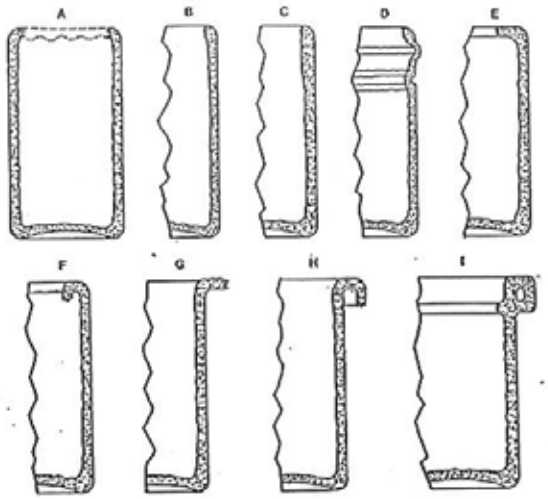

Figure 2

Removing one end of the tank produces a weak side wall at the open end of the product (Figure 2B). That wall could be strengthened by increasing the thickness of the whole tank (Figure 2C), but that would be a waste of material and cycle time.

In some instances, it is possible to strengthen the top edge of the tank by foaming the same amount of plastic material to produce a thicker and stiffer wall.

The top of this type of tank could also be stiffened by incorporating an inward or outward projecting rib just below the top of the tank (Figure 2D).

A thin-walled tank with the same strength could be produced by removing the top wall, so as to leave an inward-projecting flange on the part (Figure 2E). This flange could provide even more strength if it also extended a short distance down into the tank (Figure 2F).

If an inward projecting flange is undesirable, the flange can extend outward (Figure 2G). This structure would be even stronger if that flange also extended downward (Figure 2H).

An extremely strong tank top rim could be provided by creating a hollow box-beam type flange, as shown in Figure 2I.

All of the configurations shown in Figures 2D through 2I could be used to produce a low-cost, thin-walled part, with added strength at the open end. Some of these stiffened flanges are more complex than others, but all of these shapes could be produced with a straight opening and closing two-piece mold.

This article is a condensed extract from G. L. Beall's Hanser Publishers book entitled **"Rotational Molding Design, Materials, Tooling, & Processing"** available at hanser@ware-pak.com.

Glenn L. Beall
PD3 Director
PD3

Article

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ANTEC and NPE

Lance Neward

Why have ANTEC and NPE together? Good question. After all, they're two different kinds of events.

To understand the question, let's get back to the fundamental differences of the two organizations: SPI, the Society of the Plastics Industry, is a trade organization, the "face" of our industry, focusing on the industry as a whole, from raw material (think crude oil and its components) to industry statistics, to government lobbying, to the business side of processing, to manufacture and sale of equipment of all types, and even to standards for equipment and processing. Their big US show, formerly known as the "National Plastics Exposition," now known as simply NPE, is a very large, major international plastics trade show, hosted once every three years.

SPE, the Society of Plastics Engineers, is on, the other hand, an individual-focused organization. Boiled down to its most essential elements, the task of SPE is to help the individual practitioners of our art and science be better at what they do, whether they work in a lab, on a processing floor, or managing people who do those things. That task includes making available the latest information in polymer science and technology.

The SPE Annual Technical Conference, traditionally known as ANTEC, is an opportunity for both cutting-edge research and proven approaches to be shared on a face-to-face basis, through hundreds of peer-reviewed papers, poster sessions and networking opportunities. ANTEC is not a trade show, *per se,* but a technical conference.

The academic world, by definition, is a key part of this SPE event, enhancing and expanding our specific knowledge and its applications on a myriad of subjects. Likewise, many forward-moving companies choose ANTEC to present the results of their research and show off their developments. ANTEC is where that information can be shared among highly knowledgeable colleagues and other members of our industry. It's also where students studying to join our industry can see the latest in technology and research and, let's face it, network with those who might provide future employment.

By co-locating the major events of our industry every three years, it's an opportunity for each aspect of our business to see "how the other half lives." Obviously, there's a lot of crossover, and therein lies the benefit: Those who attend the collocated ANTEC reap the benefit of being able to see first-hand the plastics marketplace of NPE and the wonders that it offers, while at the same time doing some serious research into the latest technology presented in the ANTEC sessions and collegial networking.

On a purely economic basis, one trip is usually cheaper than two (especially if you're discussing the issue with your boss). On the other hand, it's also an occasion to attend a show that you might not be able to otherwise visit. It is well worth taking advantage of the opportunity to do both, whether your primary focus is ANTEC or NPE.

Lance Neward
PD3 Director
PD3

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SPE ANTEC 2015

Mark MacLean-Blevins

March 23rd – 25th, 2015
Orange County Convention Center, Orlando, FL, USA

It is ANTEC conference time again. PD3 will be hosting two technical sessions during ANTEC, one session W16 on Wednesday morning starting at 8:30 in room S320E and the second session W27 on Wednesday afternoon starting at 1:30 in room S320E. Our PD3 Technical Program Chair, Mike Lacey, has lined up 13 papers between the two sessions, continuing to build the program from last year.

The Executive Committee and Board of Directors for PD3 will hold their annual ANTEC Board meeting on Tuesday March 24th at 5:00 PM in Room S322. Please plan to join us for a general membership division business meeting at 4:30 PM on Wednesday, directly following our last technical paper presentation in our session room S320E.

If you are attending ANTEC and if you are a PD3 member, stop in to either of the sessions and introduce yourself, or better yet, come to the general PD3 membership business meeting and volunteer for a committee or board position.

We look forward to meeting you at ANTEC – see you in Orlando!

Mark MacLean-Blevins
PD3 Councilor
PD3

Article

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SPE-PD3 Announces Cramer Scholarship Recipient

Ed Probst

The 2014 Robert E. Cramer/Product Design & Development Division/Mid-Michigan Section Scholarship was awarded to Jake Fallon who is a senior this year at Penn State University in Erie. Jake received $1,000 to help pay for his tuition.

Jake is from Cranberry Township, PA and is working toward a Bachelors degree in Plastics Engineering. During his studies he has maintained a GPA of 3.62. He has been planning on an engineering career since the start of high school and during that time he took classes in engineering and attended the Westinghouse Honors Institute.

In college, Jake has been very active in the local student SPE section, worked as a resident assistant and has also been a teaching assistant for the Polymer Materials and Properties Class.

During the summer of 2013 Jake was able to get some real world experience by working at Delphi Connection Systems, where he was able to design molds and sample parts.

THE SPE-PD3 wishes Jake best of luck in his plastics education and hopes that SPE will continue to be a positive influence in his career.

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The SPE Product Design and Development Division and the Mid-Michigan Section established the Robert E. Cramer Scholarship jointly. Bob retired from Dow Chemical, was a member of SPE beginning in 1987and active in PD3 as a moderator of the SPE Design Forum on the Internet. He served on the board of PD3 and was also chairman of the SPE Education Foundation. Bob Cramer passed away September 14, 1998

Ed Probst
Chairperson Elect
PD3

Dedication

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Patsy Beall

Leading members of the plastics industry joined with family and friends at a Nov. 15th awards dinner to recognize Patsy Beall as an Honorary Member of the Society of Plastics Engineers. The Honorary Member grade is rarely awarded. This is the first time this designation has been given to an individual for his/her contributions to SPE. The award is overseen by the Past Presidents Advisory Board of SPE.

Patsy was recognized as the force behind her business partner and husband, Plastics Hall of Fame member Glenn Beall, as well as a mentor and influencer of plastics professionals. She was cited for her guidance of young professionals, advocacy of SPE and emphasis on education in the nomination by long time SPE member Barbara Arnold-Feret.

The celebration dinner was organized by Mark Wolverton of the Chicago Section and underwritten by the Mold Making and Mold Division, the Chicago Section, the Rotational Molding Division and the Product Design and Development Division of SPE.

> *"Patsy is one of SPE's best cheerleaders – telling everyone about the great work that SPE does in education, in technology and in bringing together people who work in industry. Election to Honorary Member of SPE is a well-deserved recognition."* said Wolverton.

Patsy received a framed certificate from Russell Broome, a Past President of SPE and current Managing Director of the Society, a trophy, and a gold SPE pendant with emerald accent mounted on a hand crafted horn pendant. The horn base has special significance to Patsy because of her collection of horn combs and to Glenn as a member of The Worshipful Company of Horners. Ms. Arnold-Feret read the nomination and gifted Mrs. Beall with a sparkling tiara to signify that Patsy was the "godmother of plastics" in the eyes of many.

In remarks read by family friend Gail Rotheiser, Patsy noted that plastics and the people in SPE have become her second family and that she was deeply honored by this recognition. From SPE press release

Editors' note: *For those of you who haven't heard, Patsy died in her sleep one week later on November 22 at home. Memorial services were held in Libertyville, IL and in Wyoming, IL to remember Patsy as a wife, sister, aunt and friend. She will be greatly missed.*
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Announcements

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PD3 Calendar

February 23, 2015

SPE ACE Conference 2015

March 23, 2015

ANTEC® Orlando @NPE2015

March 24, 2015

The Plastics Race - QR Code Sponsor

March 25, 2015

Speed Interview - Company Registration (Interviewer)

The SPE Next Generation Advisory Board (NGAB) is pleased to offer its annual Student Speed Interview Session on Wednesday, March 25, 2015 during ANTEC® @ NPE 2015. Sponsored by SPE and the NGAB, this session is for students ready to enter the workforce or for those interested in a lucrative internship opportunity.

April 10, 2015

2015 SPE Detroit Section Material Auction

April 29, 2015

identiPlast® 2015

May 5, 2015

10th Annual AUTO EPCON

Automotive Engineering Plastics Conference 2015 - Troy, Michigan

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May 12, 2015

6th Annual National Hands-On Thermoforming Workshops

Heavy/Gauge/Cut-Sheet and Thin Gauge/Roll-Fed Thermoforming with Experts Jay Waddell and Mark Strachan

May 14, 2015

Extrusion Minitech

June 16, 2015

Plastics Design & Moulding 2015

Boardroom

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2014-2015 Board of Directors

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Committees Needing Chairpersons

Education

Awards

House

Public Interest

Special Events

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Classified

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