

# NEWSLETTER



**SOCIETY OF PLASTICS ENGINEERS, INC.**

## MESSAGE FROM THE DIVISION CHAIRMAN

All of us are used to judging when a thermoplastic sheet is the right temperature to form; we can tell by the amount of smoke or the drape or how it feels to our educated thumb or the surface temperature registering on a pyrometer, whatever method we use we know when the sheet is ready to form. Maybe it is a little corny, but I think we can make that analogy with where the thermoforming industry is now. We are on the threshold of really becoming a full fledged industry within the plastics industry rather than just an interim low cost manufacturing method until there is time and money to do something better. With wider use and development of pressure forming, solid state forming, billet forming, etc., we have many more techniques to thermoform rather than just vacuum.



**Pete Hughes**

*(Evidence of this change is the fact that most of us now call ourselves thermoformers rather than vacuum formers.)*

In addition, the equipment available is much better than ever before. When I first started in this business 25 years ago, equipment looked like it was built from an erector set or was so massive, it looked like it could crush steel. More importantly, we have a cadre of men who have been in this industry for a generation and have succeeded to the point where they can take the time to examine their industry and try to help the industry establish itself in the same league with injection molding, resin processing, extruding, etc. Represented on the Board of Directors of the Thermoforming Division is a group of men who represent these professionals. And, as representatives of our industry, the Board of Directors is dedicated to the development and dissemination of technical information, providing a forum for the exchange of knowledge regarding thermoforming and providing some national leadership to our industry.

*(In my next letter, I will expand on my views of who we are really competing with and where we stand in that competition.)*

## HISTORY IN THE MAKING?!

Last month at the National Plastics Exposition in Chicago we got together board members and leaders from both SPI and SPE representing the thermoforming and extrusion industries. We believe it is the first time ever that the leadership of the two industries (*from the two professional groups*) have held a meeting jointly. A general discussion of possible areas of cooperation took place with a general consensus that we should continue "this sort of thing" meaning we should keep talking. Along this line, we have invited a representative from each division to our Chicago meeting followed by their presence at our thermoforming division board meeting. We may not have made the history books but to have 35 men show up for a meeting at 8:00 a.m. to discuss common intents between extruders and thermoformers represents a small historic step for our industry.

## THERMOFORMING DIVISION Sets Goals for 1982 - 1983

1. Publish newsletter three times yearly.
2. Provide a quality technical program for 1983 ANTEC.
3. Increase division membership to 800.
4. Present our annual education award.
5. Complete a set of guidelines for thermoformers when ordering extruded sheet.
6. Present an annual "Thermoformer of the Year" award.
7. Develop a slide presentation on thermoforming.
8. Promote thermoforming as a competitive industry to injection molding.

## BOARD MEETING

The next Board of Directors meeting is scheduled for October 9, 1982 at the O'Hare Hilton Hotel, Chicago, IL.

## SOCIETY OF PLASTICS ENGINEERS, INC.

### Thermoforming Division

P.O. Box 90678  
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### DIVISION OFFICERS

- Chairman ..... Peter I. Hughes  
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Secretary ..... John Wise  
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National Councilman ..... Franklin D. Palmer  
Past Chairman ..... Herman R. Osmers

### COMMITTEE CHAIRPERSONS

- Technical Program ... Dick Osmers, Dick Kraybill  
Publication ..... Jim Osborne, Stan Rosen  
Membership ..... Bill McConnell, ~~John Wise~~  
Nominating ... Dick Osmers, Charlie Hovespian  
Education ..... J. Holden, J. Throne, D. Osmers  
Standards ..... Pete Hughes  
SPI Coordinator ..... John Kelly  
Auditing ..... Charlie Hovespian, Mort Hibel  
Election ..... Dick Osmers  
Awards ..... Jim Throne, Frank Palmer  
By Laws ..... J. Throne, F. Palmer, P Hughes  
Slide Presentation ..... Les Bohannon

### CONGRATULATIONS BILL MCCONNELL

In a brief, but warm ceremony, Chairman Dick Osmers presented the "Thermoformer of the Year" award to Bill McConnell.

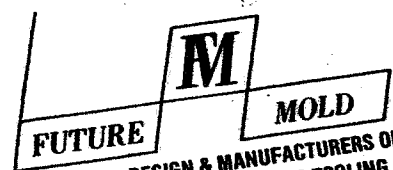
Upon receipt of the award, Bill remarked on the exciting innovations that have taken place in the thermoforming process over the years. His enthusiastic optimism about the future of our discipline and its related contribution to plastics processing, in general, makes one feel thankful that we are associated in an industry with such quality human beings. Congratulations Bill, from all of us.



Bill McConnell Dick Osmers

The award was presented following the thermoforming technical session of ANTEC at the San Francisco Hilton on May 12, 1982.

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All individuals who have submitted abstracts and have been approved for presentation should send completed papers to:

H.R. Osmer  
Chemical Engineering Analysis  
215 East Ridge Road  
Rochester, NY 14621



### **SOME OLD WIVES' TALES ABOUT VACUUM FORMING**

by Pete Hughes

(Heard around a thermoforming shop)

**1. "It's an art, not a science."**

Vacuum forming is a technology dependent on specifications and not dependent on someone's magic touch.

**2. "Its got to be dried."**

Drying of thermoplastics may be a requirement dependent on the plastic's individual water absorption rate and the moisture conditions in which the material has been stored. Except for polycarbonate, material can be dried and stored for weeks or months without any significant water absorption. Most materials received except polycarbonate probably will never need drying unless material has been stored for a year or more or has been in an extremely wet or humid atmosphere.

**3. "A machine takes forty-five [45] minutes to warm up."**

Our equipment takes five (5) minutes to be hot enough to begin forming. If we are not forming on all equipment at 7:00 a.m., it is a negative reflection on the vacuum forming department.

**4. "But you have to watch the material being formed."**

The operator does not need to hang over his equipment with one finger on the "out" button and a coffee cup in his other hand, waiting for the right moment to form. We have \$200,000 of equipment which has been purchased to relieve the operator of such a useless task.

**5. "You can only run three [3] frames on the rotary. The fourth frame won't work."**

A four station rotary is built to run four(4) frames. If it doesn't it needs repair immediately so it will run four frames.

**6. "You have to cool down a rotary thirty [30] Minutes at continuous run so as not to overheat the frame fittings."**

Our machines can be cooled down in ten (10) minutes on continuous run.

**7. "But you have to run the mold base into the material one or two inches to get a seal. It doesn't hurt the frame."**

Running the mold base into the material any further than necessary will bend the frame and then we we will have to push further and further into the material and soon we will have a machine that won't operate at all.

**8. "But we've done everything and it won't pull." [Usually after 5-20 hours have been expended and the mold has been pulled off the machine.]**

The policy of this company is that after the first two (2) pulls, if there is not a good pull, the best experience of this company shall be consulted and a definite plan shall be immediately developed to solve the problem. Never may a mold be pulled of a machine because of failure to pull a good part without prior approval of the plant manager or the production manager.

**9. "It's not necessary to make up a new cycle sheet each time a run is made on the same part."**

Each run of material is different because the material we receive is slightly different, and the operators are slightly different. We need a new cycle sheet each time a run is made to build up a history of operational information.

### **SPECIAL STUDENT AWARD**



Miss Je Nette Yarwood, a sophomore at Chico State University of Chico, California received an award for her active role in the Golden Gate Section of the SPE. Miss Yarwood is Secretary of the student SPE and majors in Polymer Technology.