ANTEC '91
Montreal

Plastics – Rendez-vous with Excellence
Plastiques – rendez-vous avec l’excellence

ANTEC IN REVIEW

When we were putting together the technical program for the 49th ANTEC, we were trying to follow the theme of An International Approach to Coloring Plastics. Since the ANTEC was being held outside the United States, this theme seemed fitting. Reviewing the list of speakers, it seems that we were indeed faithful to our theme. Of the ten papers presented, two were by Canadians and one by a Brit. In fact, we also had abstracts originating from Mexico and Switzerland.

Although people may have felt there were too many papers from titanium dioxide producers included in the program (although in my opinion one can never have enough papers presented related to titanium dioxide), the content of the presentations were found to be diverse. The morning session had papers related to Canadian health safety regulations, ultrafine titanium dioxide, color concentrates and carrier resins. The afternoon session had papers related to the discoloration of plastics, the mechanical properties of pigmented thermoplastics, color measurement techniques and cadmium free pigments.

There was definitely something for everyone in this program.

The general theme for the ANTEC was A Rendez Vous with Excellence. Over 900 abstracts were received, with about half of them being through solicitation. The final program was comprised of over 600 papers, which were reviewed by at least 2 persons. These papers were organized into 116 parallel sessions over 4 days. Considering the number of papers and the review process, ANTEC was truly a Rendez Vous with Excellence.

(Continued on page 6)

CHAIRMAN'S CORNER

On behalf of the Board of Directors, I would like to take this opportunity to officially welcome you as we begin SPE's Golden Anniversary Year.

New Orleans is the site of this year's October RETEC. You will find a splendid variety of attractions provided, which range from a River Boat Dinner/Dance Cruise to two full days of technical papers covering many aspects of our industry. After having reviewed several preprints, I am convinced that you won't be disappointed. This annual event is gaining a reputation for excellence as the colorist's best chance to learn from the best. And it's like tennis, golf or any other sport: Running with the best is a sure-fire way to improve your game.

Many companies have been keeping tight rein on their travel budgets but, even as I write, there are signs that corporate travel is coming back to its pre-war level and likely to be in full swing by Fall. The RETEC Committee fully expects to continue the trend of greater attendance every year...from Atlanta to Newport, to Sawmill, to Charlotte, to New Orleans.

The Board of Directors meets in August and January every year. By choosing Sandusky this Summer, we are planning to include a Terra Tech color-matcher's tour. On the other hand, last Winter we scheduled our meeting in New Orleans for the Board to check out Marriott's RETEC facilities. We can report to you that they are absolutely superb.

The heart of the venerable French Quarter or “Vieux Carre” is an easy walk from the hotel, and it’s a short drive to many other attractions: the birds in Audubon Zoo, St. Louis Cathedral in Andrew Jackson Square, the iron-balconied houses in the Garden District, and the Greek Revival mansions on the plantations. Also, Preservation Hall is the Jazz Mecca if that's your taste...but speaking of taste, how about that delight to the palate they call jambalaya?

So, my friends, hope to see you there!

CHARLEY BRADSHAW

MARK YOU CALENDARS!
October 15-17, 1991—New Orleans, LA
RETEC XXIV
“Elements of Color and Appearance for the Thermoplastics Processor”

This year's program is a joint conference between the Color and Appearance and the Thermoplastics and Foams Divisions.

On Oct. 15, make way for registration followed by a riverboat dinner cruise! The technical program runs on Oct. 16 and 17 with the theme “Elements of Color and Appearance for the Thermoplastics Processor.” Examples of feature papers include “Coloring Products for Rotational Molding,” “Pigmented Fibers—Interactions Among the Production Components That Affect Color,” and “Stabilization Aspects of Additive-Pigment Interactions” along with many more exciting topics. For more program details, see page 2. For questions about the technical program contact Pamela Gardner at (304) 464-6259.

Table top exhibits will be available this year as they were with last year's RETEC in Charlotte. For more information on exhibits or suites contact Mike Corcoran at (616) 392-2391.

SEE YOU IN NEW ORLEANS!
Board Meeting Highlights

Your CAD board and TPC spring meeting was held at the site of ANTEC '91 in Montreal.

The TPC first reported on our upcoming technical conferences followed by the board meeting.

Treasurer—John Hackman—The division is in fine shape with a $72,342 balance after posting the RETEC 1990 receipts.

Council Division—Bob Charvat—Bob has retired as councilor and John Copp has been elected to replace him in this post. Thanks to Bob for his many years of service.

Membership—Jack MacMillan—We are ahead of our goal of 10% growth for the PRIDE Criteria. We have had a 16% membership growth. The 1991-1992 officers were confirmed as follows:

Chairman .................. Charlie Bradshaw
Chairman Elect .............. John Hackman
Treasurer .................. Brian West
Secretary .................. Regina Wojciechowicz

Elections—The following members were elected to the board for 1994 terms: Robert Charvat, Terry Golding, Jack McMllan, and Bill Jarrett. Welcome aboard to our new board members and many thanks to outgoing members Dick Abrams, Jeff Parker, and Bob Zeller.

Education—Tim Lewis—We will be continuing CAD's support of the successful Terra Tech color program in 1991-1992.

For more details I refer the reader to each officer's or chairman's section elsewhere in this issue.

BRIAN S. WEST, Secretary
Color and Appearance Division
TREASURER'S REPORT

Beginning Balance (1/22/91) ........................................... $48,777.56

A. Receipts
1. Division Investment Plan
   January Interest ........................................... 349.47
   February Interest .......................................... 293.20
   March Interest ............................................. 345.98
   $ 988.65
2. Newsletter Sponsorships ...................................... 4,178.34
3. Board Dinner .................................................. 885.40
4. Division Membership Rebate .................................. 3,785.20
5. RAM Award ..................................................... 100.00
6. RETEC (Charlotte) Oct. 1990 .................................. 19,164.47
   Total Receipts .............................................. $29,102.06
   Funds Available ............................................ $77,879.62

B. Disbursements
1. Newsletter Mailing ........................................... 1,800.58
2. Don Deem (Board Dinner) ..................................... 978.11
3. Marriott Hotel (Board Lunch) ................................ 430.37
4. Pendell Printing (Ballots) ................................... 1,027.40
5. ISCC (Dues) ................................................... 100.00
6. Marriott Hotel (Board Meeting) .............................. 192.17
7. SPE (ANTEC Student Travel) ................................ 1,000.00
8. Bank Service Charge ......................................... 8.19
   $5,536.92

Current Balance (5/7/91) ........................................... $72,342.70
Checking Balance .................................................. $25,009.20
Division Investment Plan Balance ................................. $47,333.50

JOHN R. HACKMAN, Treasurer

Council & Division Committee Report

The SPE Council, as well as the Division Committee, met during the Montreal ANTEC. The ANTEC attendance was 4,190—lower than last year, but good considering the economic slowdown and the fact that the National Plastics Exposition siphons some attendance.

The highlights of the Division Committee was that the Plastics Recycling Division was chartered and is no longer a Division-in-Formation. The newly written CAD Purpose and Scope was also accepted by the Division Committee.

The highlights for the Council meeting were as follows:
1. The International Associate Chapter concept was continued for a maximum of one more year for the three sections (Central Europe, Benelux and India) currently participating in that mode of membership.
2. A revision of Bylaw B-51 was adopted, providing rebates to Sections-in-Formation on the same basis as to Division-in-Formation.
3. An operating budget with a total income of over $5.8 million was adopted.
4. President George W. Thorne revealed the key to his 1991-1992 administration was "Innovation" with five major goals being centralization of education functions, student chapters, recycling, international and the 50th anniversary.

JOHN COPP, Past Chairman

Membership Report

1990-91 Membership Program
- Program progressing smoothly with continued stable growth. See attached graph which charts the growth of the Division since July 1987.
- We continue to send each new member a welcoming letter which informs him/her of the benefits of membership and of the programs of the Division. It also urges their participation. This letter will be corrected to contain the names and telephone numbers of the new officers.
- We actively pursued recruitment of delinquent members by sending out notices to all delinquent members requesting their assistance in correcting their membership status. We were rewarded with a $100 check for the RAM program this year.
- We set up and manned a Society Information booth at the Fall RETEC in Charlotte and were somewhat successful. We know of at least 5 new members who joined CAD as a result of this. We plan to do so again this fall in New Orleans.
- Over the period from 2/1/90 to 1/31/91 our membership grew by 269 members (16.4%). This was 15th best (out of 18 Divisions).

Current Membership
As of 3/91 (latest available figures)
1990-91 Society Membership Goal for CAD

COLOR & APPEARANCE DIVISION
HISTORICAL MEMBERSHIP GROWTH

1700 Members
1736 Members

JOHN MacMILLAN
F.D. FISACKERLY
F. D. (Zack) Fisackerly, Chairman of the Color and Appearance Division in 1985-86, died April 1, 1991, of cancer. He was born January 14, 1928, in Cleveland, MS.

A graduate of both the University of Southern Mississippi with a B.A. (Pre-Med) and the University of Southern Mississippi with a B.S. in Chemistry. Zack joined the Flintkote Company, producers of PVC flooring as Quality Control Chemist in 1956. In 1963, Zack went with Monroe Manufacturing Company (later, Conoco Plastics) as Production Superintendent in PVC compounding. He was promoted to Technical Director, Conoco Plastics, Mississippi Plant, and from 1967 to 1970 served as Plant Manager. During this period, he managed a facility that grew from 200 to 350 employees. In 1970, he became Corporate Manager—Technical Operations, Conoco Plastics, which included two PVC plants, one plasticizer plant and four PVC pipe plants.

In 1972, Zack joined Kerr-McGee Chemical Corporation, Oklahoma City, OK, as Manager of Technical Services—Plastics, where he organized the titanium dioxide technical services group for the plastics market. During this period, he was instrumental in persuading the National Sanitation Foundation to make grades of titanium dioxide generic ingredients in PVC pipe formulas. Since 1988, he had been the Technical Director of Pigment Operations of Kerr-McGee Chemical Corporation, involved with titanium dioxide production, sales and application for plastics, paint, industrial finishes and paper industries.

Zack had been a member of SPE since 1963. In addition to being the Chairman of CAD, he was Program chairman RETEC 1980. Over the years, he had been a speaker at many functions related to the plastics industry. Zack was presented the “Outstanding Achievement Award” by the 1990 CAD Board of Directors. He was a member of the Board of Trustees for the Museum of Plastics.

He is survived by his wife, Francis, a daughter and son-in-law, Lisa and Colin Tuttle, of Edmond, OK, and a brother, Bob Fisackerly, of Memphis, TN.

We are going to miss Zack’s gentle southern drawl and hearty laughter at future CAD functions. In Zack’s memory, the Color and Appearance Division has made a gift to the National Plastics Center and Museum in Leominster, Massachusetts.

C.A.D. People

The purpose of this column is to keep you informed of the activities of your friends and acquaintances in the Color and Appearance Division. If you have any good news of a colleague, please forward that information to the editor or to John Copp of The Dow Chemical Company (517/636-9281).

Harry Hurilla has accepted a position with Tupperware in Hemingway, SC.

Jeff Parker, a former CAD board member is being relocated by Tupperware to the Orlando, Florida area. We all hope Jeff buys a large enough house for us snow bunnies to visit.

Mary Heitman is enjoying her new position as Plastics Lab Manager with Cabot Corporation in Billerica, Mass. No, she doesn’t sell Bucky balls!

Steve Malaga of Mobay is relocating to Pittsburgh as a Business Manager for Mobay’s Pigment Department.

Bob Henson of Dow Chemical has had a change in responsibilities at Dow and is now a group leader of the Durable Injection Molding Group.

Randy Eliksi has joined CertainTeed Corporation in Jackson, Michigan as Materials Development Director.

Regina Wojciechowicz has been promoted to a new position with ICI America in Wilmington, DE as Customer Service Manager of the Specialties Division.

Colleen Dennett has joined Polymer Materials, Inc. in Jasper, TN.

Elections were held for Board of Directors and Technical Program committee officers of the C.A.D. (1991-1992) with the following results:

Board of Directors
Chairman—Charlie Bradshaw, Americolor
Chairmen Elect—John Hackman, Shepherd
Treasurer—Brian West, Technic PM
Secretary—Regina Wojciechowicz, ICI

Technical Program Committee
Chairman—Earl Sexton, Crane Plastics
Chairman Elect—George Rangos, CIBA-Geigy
Secretary—Gary Beebe, Rohm and Haas

JOHN COPP

CAD ELECTIONS

We have continued our policy of a separate mailing of election ballots and received back 538 ballots by the April 5th deadline which is an all time high response.

The newly elected Board of Directors, Technical Program Committee and Council Representative are as follows:

Board of Directors: Bob Charvat (Engelhard), Terry Golding (Spectrum), Jack MacMillan (ICI), Bill Jarrett (Kerr-McGee)

Technical Program: Bruce Mulholland (Hoechst Celanese), Gordon Gavin (Monsanto), Bob Zeller (Alzko)

Council Representative: John Copp (Dow Chemical)

Many thanks to all the people who ran for these CAD positions and especially to those who were elected and have committed a part of the next 3 years of their time to the operation of our division.

JOHN COPP, Past Chairman

CAD EDUCATION SURVEY

The Color and Appearance Division Education Committee sent a survey to all CAD members, accompanying this year’s ballot. 427 CAD members responded to the survey, and 42 of these provided additional comments. By this assessment, the Education Committee is determining what direction CAD should take on education issues. Here are the results:

<table>
<thead>
<tr>
<th>Item</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work with schools that are currently teaching plastics technology to include the coloring of plastics in their course material.</td>
<td>1</td>
</tr>
<tr>
<td>Develop a seminar which could be conducted at SPE and other events, that will address the topic: Quality Assurance of Colorants and Color Concentrates</td>
<td>2</td>
</tr>
<tr>
<td>Expand SPE Seminars to include a more advanced course or courses</td>
<td>3</td>
</tr>
<tr>
<td>Re-institute a program to visit SPE student chapters, to present a talk on coloring plastics</td>
<td>4</td>
</tr>
<tr>
<td>Work to further improve the facilities and course structure at Terra Technical College</td>
<td>5</td>
</tr>
<tr>
<td>Work to increase enrollment in the Terra Tech Plastics Color Technology Program</td>
<td>6</td>
</tr>
</tbody>
</table>

The Education Committee is already doing some work on the two top rated items, and is considering some of the written comments made by the survey respondents. If you have any further comments, or wish to be of assistance, contact Tim Lewis at PMS Consolidated, 419/668-4844.
BIV WHACKS

Dear Readers:

Recycling. It's the buzz word of the nineties. Has anyone given thought to the opportunities in the color field created by the environmental movement? Two questions, probably prompted by the full moon, came my way. They both concerned colorizing recycled plastics.

A generation ago the character played by Dustin Hoffman in the movie "The Graduate" was advised to "get into plastics!" Today that line would be, "Get into garbage? Plastic garbage." Whether you call it garbage, trash or the politically correct "recoverable resource," it is being analyzed, talked about and written about more than sex. I wonder if Dr. Ruth has considered a career change.

It is not my intent to disparage the efforts of the plastics recycling pioneers. Pioneers in any field are charting uncharted territory, and like Columbus five hundred years ago, are told by the doom-sayers that they will fall off the edge of the world or be devoured by dragons.

One of those dragons, as we of the color cognoscenti know, is color itself. The recycling rules for my own community specifically state that only plastic milk bottles and soda bottles are acceptable for pick-up. Detergent bottles and other plastics are not to be recycled. I wonder if anyone told the town fathers about polyethylene base cups on the soda bottles? Of course, it all comes down to practicality and economics. Eventually the standardized SPI recycling codes may help, but in the meantime how do you tell a layman about the difference between rigid PVC, polycarbonate and PETG? To the layman they all look the same. Plastic is plastic.

But I digress. The following questions are real. I didn't make them up. They came from real people. People who flunked physics.

1. "I have a source for reclaimed green PET soda bottles. How can I make this material red?"
2. "How can I make a medium gray nylon into a black? I tried adding carbon black and then nigrosine dye, but by the time I had a dark gray, the physical properties of the material were no good, and it still wasn't black enough."

Several centuries ago the goal of alchemists was to find the philosopher's stone, that magical element that would transmute lead into gold. Apparently there are some people still looking.

A color which transmits light in the range of 475 to 525 but less at other wavelengths is green. Within certain limits its hue can be modified. It can even be made into a black or brown, but to turn it into its complement requires eliminating the green. Short of impractical and costly chemical processes, this can't be done. I mean you're working with garbage here!

With regard to making a jet black from a material which contains a substantial amount of titanium dioxide, it can't be done either. White, by definition, scatters light; black absorbs it. A mixture of the two does something in between. Imagine how difficult color matching would be if this were not the case. There are, of course, little tricks that can make a dark gray appear darker. Make the finished product with a high gloss. Add a small amount of a transparent blue or violet. Add an optical brightener.

Sooner or later I expect to hear from someone who has purchased several truckloads of mixed plastic scrap, created an automotive master standard from it, sold it to Bill Longley, and now has to duplicate this monstrosity, but it has to be heavy metal free. There's a special place in color matchers' hell reserved for people like that.

ROY G. BIV

TERRA TECHNICAL COLLEGE
Plastics Color Technology Program Update

Those of you who attended ANTEC were hopefully able to visit a display booth which was staffed by a group of Terra Technical College students. These were some of the thirteen second year students who have not graduated from the Plastics Color Technology Program. These are the first graduates. Their skills are in demand—many of them have already been hired within our industry, and the others are currently interviewing.

Gordon Saam, Dean of Engineering at Terra Tech, states that there will be 12-15 second-year students for the 1991-92 school year. The CAD Board has granted $15,000 in scholarship money to be divided between qualified second-year students, and first-year students.

An Advisory Board Meeting was held on May 16, 1991 with Gordon Saam, and the three instructors, Ron Penrod, Jamie Przybylski, and Chuck Swearingen. CAD members on the Advisory Board are Richard Abrams, Bob Charvat, Jack Graff, Tim Lewis, Dennis Meade, Bruce Muller, and George Rangos, Jr. As a result of this meeting, it was decided to assign one of the CAD Advisory Board members to each course. This "Course Advisor" will assist the instructors in content, arrange for guest speakers, obtain or assist in developing instructional materials, arrange for field trips, etc.

The school is in need of the following equipment: 3 "Metler" precision balances; a desiccant dryer; 2 lab ovens; a small chip molder.

If you can assist with any of these items, please call Gordon Saam at 419-332-1002.

TIMOTHY R. LEWIS, CAD Education Chairman
ANTEC '91—MONTREAL

ANTEC IN REVIEW (from page 1)

The conference center, where the technical papers and exhibits were located, even though being 10-15 minutes from all the hotels, did not pose an inconvenience. Buses were available to transport those too tired to walk the distance. Except for the rain on Monday, the weather was ideal for walking about Montreal. Some of the places visited, and experienced by many during the conference included: Old Montreal, Olympic Stadium (to watch the Expos win in extra innings), Schwartz's (best smoke meat in the world), Bagel Factory and numerous French restaurants like Les Halles, Le Faudeau, etc. Other memories include trying to understand signs that look familiar but have funny writing on them and walking downtown at 2 a.m.

Hopefully we will not have to wait another 15 years to have another ANTEC in Montreal.

“A technical session packs ‘em in!”

CAD RECEIVES PRIDE AWARD
Accepting the 1991 PRIDE Award at the Montreal ANTEC from SPE President Leonard Drexler is Don Deem, 1990-91 CAD Chairman. The PRIDE Award is presented annually to those Divisions meeting specific requirements set forth by the Society.

“We’re in good shape financially. Income exceeded expenses.”
Don Deem—outgoing chairman
John Hackman—outgoing treasurer

“There are only two of these ties left in the world. The other one belongs to some guy named Billmeyer.”
Don Deem, Steve Malaga and Tom Haney

“And there, down by the river, is this really great restaurant.”
John Copp and Jeff Parker

“Our pigment did what to your polymer?”
Gary Beebe, Rohm & Haas
Suzanne Ross, CIBA-Geigy
THE ESSENCE OF PIGMENT
By JOHN GUZI, Jr.
CIBA-GEIGY CORPORATION—PIGMENTS DIVISION
JAMES & WATERS STREETS
NEWPORT, DELAWARE 19804

PARTICLE SIZE EFFECTS

Figure 4 is a generalized plot of light scattering and light absorption as a function of particle size. More specific data would be dependent on the wavelength of light and the indices of refraction and of absorption of the dispersing medium [2]. Light absorption increases with decreasing particle size until at below approximately 0.05 μm, in the single crystal region, an apparently constant level is reached and the color strength of the pigment is maximized. Such particles scatter little light and if they have approximately the same refractive index as the medium in which they were dispersed, they look transparent.

![Particle Size Effects on Scattering & Absorption (After Schröder [2])](image)

**FIGURE 4**

How effectively a pigment scatters light depends on its refractive index in relation to the medium in which it is dispersed and the size of the scattering particles. Scattering (opacity) increases with increased particle diameter until the particles are about half the wavelength of light for a high refractive index pigment, and then decreases as particles become larger. For pigments of a lower relative refractive index, such as organic pigments, slightly larger particles, closer in size to the wavelength of light, produce maximum opacity.

![Particle Size Effect on Lightfastness Disazo Condensation Red, 0.08% in Fiber](image)

Figure 5 illustrates the effect that particle size has on lightfastness. In a laboratory reaction, crystals of a commercial disazo condensation red were deliberately increased in size to obtain the resultant improvement in lightfastness. The fiber was stabilized polypropylene exposed at 89°C. As expected, the larger particles showed a loss in color strength and somewhat greater opacity.

Although rarely acknowledged, the path from laboratory to manufacture in industrial processes is seldom smooth. Figure 6 shows the particle distribution of two pilot campaigns to produce an organic yellow pigment. In synthetic fiber, the effects produced by the differences not only in particle size, but also in particle size distribution, were startling. Compared to a laboratory prototype, campaign B was weak, opaque, and lacked saturation, whereas the adjusted campaign A matched the prototype. Pigments with narrow particle size distributions are generally cleaner and have more favorable viscosity and gloss characteristics in application.

![Particle Distribution - Organic Yellow Two Pilot Campaigns](image)

**FIGURE 6**

The electron micrographs in Figure 7 are of unsubstituted, gamma-crystal quinacridone pigment at a magnification of 40,000X. Although both pigments originated from the same wet crude material, the smaller particles were formed during several additional processing steps. The result is a significant difference in hue. The finished pigment is a relatively transparent, blue-shade red and the “crude” pigment, a yellow-shade red with higher opacity and much better lightfastness. Most organic pigments undergo a finishing or conditioning step during which the optimum particle for specific properties and end-use application is produced.

(Continued on page 8)

![Particle Size](image)

**FIGURE 7**
CRYSTAL SHAPE

The electron micrographs in Figure 8 illustrate the variations in crystal shape that occur between pigment types. Azo condensation pigments tend to have needlelike, or acicular particles whereas diketo pyrrolo-pyrrole particles exist as platelets. Other organic pigments have crystals that are rodlike or cubic or brick-shaped.

**Crystal Shape**

![Diagram of Crystal Shapes]

**FIGURE 8**

Particle shape, like particle size and distribution, strongly influences rheological behavior and the optical properties of pigment dispersions. Equidimensional particles result in lower viscosity, less thixotropic systems than acicular particles. Likewise, equidimensional particles tend to be less dichroic in application because color is less affected by crystal axes that are similar in length. The optical effects of particle shape can be particularly significant in processes where pigment particles are oriented, such as during fiber manufacture.

POLYMORPHISM

Several important organic pigments, such as the quinacridones and the phthalocyanines, display a polymorphic character, or the ability to exist in more than one crystalline form. These crystalline modifications of a pigment, such as alpha or beta copper phthalocyanine, or beta and gammae quinacridone, vary in color, and can be distinguished by their x-ray diffraction patterns since their molecular structures are the same. Figure 9 shows the x-ray diffraction patterns of three linear trans-quinacridone polymorphs [3]. The alpha form is a bluish red and is not useful as a pigment. The beta crystal is the valued, bright violet pigment, and the gamma crystal yields a red color with a bluish undertone.

**X-ray Diffraction Patterns for Quinacridones (Struve [3])**

![Graph of X-ray Diffraction Patterns]

**FIGURE 9**

Alpha and beta copper phthalocyanine polymorphs are also quite different. The alpha crystal has a redder hue and is generally unstable to heat and aromatic solvents, whereas the beta crystal is greener in hue and is generally heat and solvent stable. The heat and solvent stability of the alpha polymorph can be substantially improved by the introduction of an impurity such as chlorine into the molecule, but not without the penalty of a slight shift toward greener hue.

---

**High Performance Blow Molding Conference**

Brookfield, CT, March 15, 1991... The SPE Blow Molding Division and Southern Section have scheduled a Regional Technical Conference (RETEC) for October 8-9, 1991 at the Hyatt Ravienna Hotel, Atlanta, Georgia.

The theme of the RETEC is “Olympian Progress in Blow Molding,” and will include sessions dealing with Advanced in PET Technology, New Product Packaging, Industrial Blow Molding, and Quality Considerations in Blow Molding.

Advance registration fee for SPE members is $295, $335 for non-members; on-site fee for members is $330, and $360 for non-members. Advance registration for students is $100, and $135 on-site.

For information contact Len Loudin, Chairman, B.F. Goodrich Chemical Co., 8885 Willowbrae Lane, Roswell, GA 30076 (404-594-1807) or Monroe Mitchell, Program Chairman, Sewell Plastics, Inc., 445 Great S.W. Parkway, Atlanta, GA 30336 (404-699-1511).

---

**1991-1992 SPE Officers Named**

Brookfield, CT May 9, 1991... George W. Thorne, president of Industrial Plastic Products, Inc., Miami Lakes, Florida, assumed the duties of President of the Society of Plastics Engineers (SPE) during the 49th Annual Technical Conference (ANTEC) in Montreal, Canada. He succeeds Dr. Leonard H. Drexler of AT&T Consumer Products, Indianapolis, IN.

Other officers of the 36,000-member international society are:

President-Elect ........ Henry J. Wojtaszek of A-Line Division, Key Plastics, Plymouth, Michigan

First Vice President .... Lance M. Neward of Perrin Manufacturing, City of Industry, California

Vice President, International .... Dr. Klaus-Dieter Johnke of Volkswagenwerk, Wolfsburg, Germany

Second Vice President .......... Bonnie J. Bachman of AT&T Bell Laboratories, Murray Hill, New Jersey

Treasurer ............ David R. Harper of Mobay Corporation, Nashville, Tennessee


Other members of the 1991-92 Executive Committee include Dr. Leonard H. Drexler (AT&T), Dr. Vivian E. Malpass (Ferro Corporation), Norman E. Fowler (Xerox Corporation), Norman C. Lee (Zarn, Inc.), Dr. Norman S. Behn (EPSCO), A. Nelson Wright (Synergistics Industries, Ltd.), and Robert D. Forger, SPE Executive Director.
Plasticores, Inc.
Colorant Dispensers
P.O. Box 127
Jasper, TN 37347

The most cost-effective, affordable, machine-based method for precise, reliable metering and blending of free or non-free-flowing materials without augers.

Colortronics
For more information contact:
(206) 841-1323

ACS Datacolor
Midwest Regional Office
2205 Enterprise Drive
Suite 504
Westchester, IL 60153
Tel: (708) 531-0743
Fax: (708) 531-0744

Tomorrow’s Technology Today... in plastic coatings and colorants
Coatings 1-800-323-3224 Colorants 1-800-323-5286

Spectrum Colors
Advanced Color Engineering
Kalamazoo • Minneapolis • Atlanta • 1-800-328-5589

Color Pigments
INORGANICS
Nickel & Chrome Titanate Yellows
Iron-Free Browns
IR Blacks
Cobalt Blues & Greens
COLOR DIVISION, Ferro Corp., P.O. Box 6550
Cleveland, OH 44101 • (216) 641-8580 • FAX: (216) 641-8831

SunChemical
Sun Chemical Corporation
Pigments Division
4526 Chickering Avenue
Cincinnati, Ohio 45232-1960
(513) 881-5950
FAX: (513) 881-3778

Performance Products From Engelhard
Specialty Minerals Products:
SATINTONE® calcined kaolin • EMCOR 66® reinforcement
TRANS LINK® surface treated kaolin • ASP® hydrous kaolin
1-800-932-0444, 1-800-624-0818 (in NJ)

Harshaw® Color Products:
METEOR® pigments (mixed metal oxides)
ORGANIC pigments • LEAD CHROMATE pigments
CADMIUM pigments including MINDUST® (reduced dust)
1-800-321-3762
101 Wood Avenue, Iselin, NJ 08830-0770
ENGELHARD
EXCEPTIONAL TECHNOLOGIES
First Color Matching Graduates Recognized

The first graduating class in the Color Matching major from the Plastics Engineering Program earned their associate degrees May 31 at Terra Technical College, Fremont, Ohio.

The majority of the class is already employed in the plastics industry. A few are still interviewing.

The 13 color-matching graduates are:

- Patrick E. Binkley, Inter-Metro, Fostoria
- Michael S. Brehl, Dow Chemical (co-op program will continue at Bowling Green State University), Green State University
- David F. Bryan, Midland, Mich.
- Dale L. Dachenhaus, Milliken Chemical, Chicago
- Sally Kay Eversole, Accurate Color, Lodi
- Michael J. Haubert, Accurate Color, Sandusky
- Nancy A. Hoag, interviewing, Lodi
- Timothy M. Light, interviewing, Lodi
- Annette J. Lynch, Red Spot, Evansville, Ind.
- Matthew Marksbury, interviewing, Sandusky
- Robert B. Rich, Jr., interviewing, Sandusky
- William R. Shover, O'Sullivan, Sandusky
- Robert H. Stinchcomb, interviewing, Sandusky

Of these, Dachenhaus, Eversole, George, Hoag, and Shover earned dual degrees in both plastics and color-matching. Dachenhaus earned a third degree in quality control.

The dual degree recipients were among six others graduating in the plastics program. They were James R. Bennet, Jr., Terrence George, Kevin Levine, Carl L. Oakman, Jr., Patricia Orians, and Catherine L. Voisin.

The graduates rose to their feet as Plastics Instructor Charles Swearingen was presented the College's Award of Excellence, the highest honor the College can bestow. Hired as the first instructor in the plastics program, Swearingen has supervised its growth and guided the development of the color matching major.

Swearingen credited the growth of the program to the assistance provided by the industry and the advisory council.

101 High Performance Additives and Multi-Functional Additive Packages

Now get high performance, convenience, and economy in powder, flake, liquid, and superconcentrate forms.

- ATMER® Surface Effect Additives
  - Antiblocks
  - Antifoams
  - Antistats
  - Cling Agents
  - Wetting Agents
- PDI Colorants
- PTZ® Stabilizers
- TOPANOL® Antioxidants
- TOPANEX™ UV Light Stabilizers
- CLARIFEX™ Clarifiers
- LVT™ Technology

ICI Polymer Additives
World Headquarters: Wilmington, DE 19897 USA
(800) 456-3669, Ext. 2664
(302) 886-3564 FAX (302) 886-5267
ICI Polymer Additives is part of ICI Specialties, a business unit of
ICI Americas Inc. ©1991 ICI Americas Inc. All rights reserved.

NEWSLETTER SPONSORS

The Color and Appearance Division would like to thank the companies and individuals for their generous financial support and sponsorship of the CAD newsletter. The Division's Board of Directors and the Newsletter Committee are grateful for your interest and encourage your continued participation.

For information on sponsorship of future issues, please contact:

Mr. Joseph Cameron
GE Plastics
P.O. Box 68
Washington, WV 26181
Telephone (304) 863-7473 FAX (304) 863-7156

Society of Plastics Engineers
c/o Mr. Jack Graff
Mobay Corporation
Mobay Road
Pittsburgh, PA 15205-9741