



**Special Notes**

- **NEW LOCATION!!**
- ExComm Meeting 4:30 PM
- Workshops 5:30 PM
- Networking 6-7 PM
- Dinner 7 PM
- Speakers 8 PM

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## Monthly Meeting January 12, 2006

➡ ➡ ➡ ➡ **NEW LOCATION!** ◀ ◀ ◀ ◀

**Guest Speakers: Jeff Andress and Todd Spengeman, BASF**

**Topic: Application of BASF's Divided-Wall Distillation Technology - Theory & Practice**

**Abstract:** Distillation is one of the most important unit operations in the petrochemical industry. A wide range of separation technology and equipment have been developed to meet the requirements of the situation. One technology that has been implemented successfully at BASF is that of divided-wall distillation. The presentation will discuss the benefits, design and operation of the divided-wall technology.



**Bios:** Jeff Andress graduated with a BS in Chemical Engineering from Purdue University in 1992, and has worked at BASF since. He has had assignments in Michigan, Ohio, New Jersey, Texas, and Germany. Between 1995 and 2001, Jeff was a member of two large capital project teams. He participated in all phases of the projects including, engineering, design, manufacturing representative, construction, commissioning, and start-up. The second of these capital projects included the installation of three divided wall towers for the Polyalcohols plant. Since 2001, Jeff has been the production engineer for the Polyalcohols plants in Freeport TX.

Todd C Spengeman is the Operations Manager for the Polyalcohols Group at BASF Corporation. He has held this position for 8 years. Todd's group was responsible for manufacturing guidance during design and construction, commissioning, and



start-up of two production facilities. Prior to the Operations Manager position, Todd held operations positions for multiple production units including 2-Ethylhexyl acrylate, glacial acrylic acid, neopentyl glycol and hexanediol. He has been an employee of BASF for 16 years. Todd received a Bachelors of Science in Chemical Engineering from New Mexico State University (1989).

**See Page 3 for information on the new location for the January meeting!**

## January 2006 Workshops: Begin at 5:30 PM

### C.A.S.T. (Computing And Systems Technology): Foundation Fieldbus Update

**Speaker:** Marcelo Dutra and Dave Evans, Smar International Corp.

**Abstract:** Foundation Fieldbus Technology is an "all digital" control system and communications platform that is fast becoming a "standard" in process control. This presentation focuses on the technology's evolution, documenting an actual implementation in a chemical processing facility. Attendees will also be updated on the latest enhancements to the technology. Operational and performance benefits will be defined.

**Bios:** Marcelo Dutra has 17 years of experience in designing and implementing instrumentation, automation and control system solutions in the Oil and Gas, Chemical, Sugar, Power and other industries. Since 1992, Marcelo's expertise has included all phases of Fieldbus project development. He has published several articles on Fieldbus and Control Systems technologies and has worked on numerous projects worldwide as both engineering and project manager. Marcelo has a B.S. degree in Electrical and Electronic Engineering from the University of Campinas (UNICAMP), Brazil.

Dave is currently Oil & Gas Business Development Manager with Smar International. He works with domestic and international oil & gas companies, primarily focused on instrumentation and controls as applied to production, transportation and distribution applications. His background includes over 17 years in the instrumentation and controls industry in various capacities.

### Process Safety: Responsible Care®: A New Approach to Managing Health, Safety and Environmental Quality in the Chemical Industry

**Speaker:** Jack McVaugh, P.E., R.E.M., EMS-LA

**Abstract:** Since 1988, the Responsible Care® program has been a cornerstone of the U.S. chemical industry, and a condition of membership in ACC, the American Chemistry Council. Responsible Care® focuses on environmental, health, safety and security (EHS&S) management (with a dose of social responsibility thrown in). The program, though, has lacked public credibility because of a shortage of transparency and the absence of outside verification.

In 2001, ACC created two alternative EHS&S management system technical specifications and a third party certification process. Qualification criteria for registrars and third-party auditors are extremely stringent, and only a handful of each has successfully gone through the intensive screening. Meanwhile, certification deadlines for ACC member companies are fast approaching.

Find out what led to this radical shift in a valued chemical industry initiative. Find out why even the best of companies are coming up short regarding these new standards.

**Bio:** Jack carries out consulting, training and auditing in management system implementation and related areas. He has over 21 years of environmental, business and operations management. He is a member of ISO Technical Committee 207 that developed the ISO 14000 series of environmental management standards. He is also lead EMS and RCMS® certification auditor for a major US-based registrar.

Jack is the current Chairman of the National Association of Environmental Professionals' ISO 14000 Working Group, is a member of the Texas Association of Environmental Professionals, where he has served on the Board of Directors, and has served as Program Chair for Section 1422 of the American Society for Quality. He holds a BSChE and a Master of Science in Environmental Engineering from the University of Delaware.

### Process Engineering/Plant Operations : Water Treatment Techniques and Considerations for the Chemical Industry

**Speaker:** Raymond Tang, Amergy Resources

**Abstract:** At press time, detailed information for this workshop is not yet available. Please check the website as the meeting date approaches. When the information is received, it will be posted.

If you would like notification when the information is available, please send an email to [newsletter@aiiche.org](mailto:newsletter@aiiche.org) with the subject "AIChE January PEPO Workshop."

### Environmental Issues: New Technology for Detection of Gas Emissions (Rescheduled from December meeting)

**Speaker:** David Furry

**Abstract:** This presentation is to demonstrate the uses of a new technology that has been developed for the detection and identification of chemical and natural gas emissions from sources such as chemical plants, refineries and natural gas pipelines. The technology uses a passive infrared camera with a special band pass filter installed into the system next to the detector. The camera uses natural heat as the background from the components, ground as the infrared source.

In the Hawk Leak detection system, an optical band pass filter is positioned within the absorption band of the chemical or gas to be detected, thus giving the operator a real-time visual image of the leaking components or leaking pipeline. We will also demonstrate and discuss the different uses of the camera on VOC's and HRVOC's in the chemical and oil refining industry along with how it can be used in the natural gas industry to help reduce greenhouse gases.

## Dinner Meeting Registration Information

Complete your reservation online at:

<http://www.sts-aiche.org/reservations/sts-aichereservations.htm>

You may also **cancel a reservation** using this link.

Or call (713)-295-4847 to make reservations until 4:00 PM Tuesday January 10.

The cost of the dinner is \$22 with reservation, \$24 without, 1/2 price if student, retiree, or unemployed. Payments are not (yet) accepted online. We look forward to seeing you there!

*Attendees of the Dinner Meeting will earn 1 PDH for the Texas Professional Engineer Continuing Education Programs. Remember to track your hours!*

## ExComm Meeting

The Executive Committee will meet from 4:30 PM to 6 PM prior to the monthly meeting.

## The New Location! Sheraton Hotel Brookhollow, Loop 610 and 290.

The Thursday, January 12 meeting will be held at the Sheraton Hotel Brookhollow, located at Loop 610 and 290. The change in meeting place is necessary because the Park Plaza is under new ownership, which dramatically raised prices to the point that we can no longer afford to meet there. To use your own mapping program for exact directions, the address is 3000 North Loop West Frwy Houston, Texas 77092. The phone number is (713) 688-0100.

Sheraton offers the following driving directions:

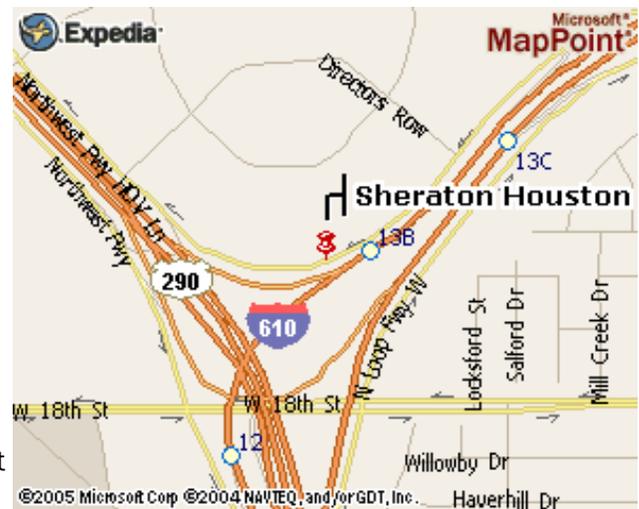
From Katy (West): Take Interstate 10 East to Loop 610 North. Take the T.C. Jester Exit and make a U-turn under the freeway. Stay on the access road, and the hotel is less than 0.5 miles on the right.

From Beaumont (East): Take Interstate 10 West through Loop 610 once. Then take Loop 610 North and exit at T.C. Jester. Make a U-turn under the freeway and stay on the access road. The hotel is less than 0.5 miles on the right.

From William P. Hobby Airport: Take I-45 North for approximately 20 miles to Loop 610 West. Take the T.C. Jester Exit and make a U-turn under the freeway. Stay on the freeway access road for 0.5 miles, and the hotel is on the right.

From IAH: Take Interstate 45 South to Loop 610 West. Follow Loop 610 West to the T.C. Jester Exit. Stay on the freeway access road for 0.5 miles, and the hotel is on the right.

We welcome feedback on the new meeting location, and suggestions for other locations. We apologize for any inconvenience which is caused by this change.



## Congratulations to the new South Texas Section Officers!

The new officers are:

Chairman Elect, David Karesh

Secretary, Kevin Hagan

Executive Committee Position 2, Ken Cox

Executive Committee Position 4, Randall Bachman

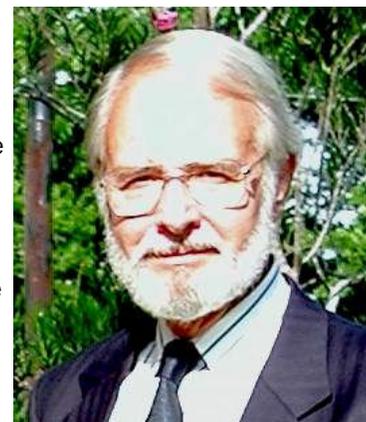
Many thanks to the Nominating Committee, chaired by Matthew Kolodney.

If you would like to be part of this committee next year, please contact Matt at:

[mkolodne@tceq.state.tx.us](mailto:mkolodne@tceq.state.tx.us).

## From the Chairman - NEW!

Welcome to a new year for the South Texas Section. Of course, it is really a continuation of the programs developed by last year's officers, committee chairmen, and a lot of other dedicated volunteers. I look forward to working with these professionals during this year in providing programs that reflect the interests of our diverse section membership. I hope you will welcome your new officers and give them the support they need to continue the traditions provided by the South Texas Section over the years.



Last year, the officers made some changes to better the Section and started two new programs. The newsletter has gone electronic, saving us thousands of dollars in publication costs. Many thanks to Susan Cannon for her skilled hard work. The new format should provide a better value for our advertisers, resulting in more ads and revenue. The web site has been reorganized and upgraded (twice); many thanks to David Hill and Karen Kabin. Our section is hosting this year's National AIChE Leadership conference in June. Peter Belmonte is chairing this effort in which we are arranging the housing and coordinating the program.

One of the new programs for this year renews this section's activities in furthering process safety. The 1992 Process Plant Safety Symposium was held in the Galleria Hotel with over 120 papers presented to 700 participants. This forum is now National's Center for Chemical Process Safety. Because of the interest generated by recent major plant explosions, I believe our section which represents one of the largest local AIChE memberships in the world and the largest concentration of chemical plants and refineries in the USA, has the responsibility to provide an opportunity for our local professionals to discuss the implications of these safety lapses and search for reasons and for ways to address the causes.

Jack Chosnek is putting together this process safety forum for our March meeting. We plan to have an afternoon and evening program, so put March 2nd on your calendars and plan to attend and participate. We are asking if chemical engineers are stepping up to their professional responsibilities in preventing recognized hazards in the design and operation of chemical plants and refineries. Be there to express your opinions and question the policies that result in such disasters. Could your plant be next?

In addition to our monthly meetings, you can look forward to continued opportunities to learn and participate in networking activities through the workshops held before many of the monthly meetings, through the Young Member activities, and through occasional regionally located meetings. I hope to hear from many of you regarding ways to make the programs of more interest to you. As always, your participation is paramount to the success of the Section. What better way to come in contact with new ideas and new slants on old ideas or to meet others in your field than being active in the Section?! I guarantee, you will get a lot more out of your participation than you put into it! I plan to communicate directly with local employers of chemical engineers for their inputs on what they perceive to be of value in their employees participation and what we can do to make the program more meaningful.

Lawrence I. Chriswell, P.E. (Larry)

## Workshop Chairs

Do you have a suggestion for a workshop? Question about a previous workshop, or this month's? Here is a list of the Workshop Chairs for 2006.

### COMPUTING AND SYSTEMS TECHNOLOGY (C.A.S.T.)

Shane Tierling, KBR  
713.753.3692  
713.753.5353 Fax  
[shane.tierling@halliburton.com](mailto:shane.tierling@halliburton.com)

John Cheng, Basell Polyolefins

281.604.3294  
[john.cheng@basell.com](mailto:john.cheng@basell.com)

### ENVIRONMENTAL ISSUES

Kiranmai Valluri  
713-767-3742  
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### PROCESS SAFETY MANAGEMENT

Jack Chosnek  
KnowledgeOne  
P.O. Box 580465  
Houston, TX 77258  
(281) 538-0220  
[JC@knowledge1.net](mailto:JC@knowledge1.net)

### PROCESS ENGINEERING/PLANT OPERATIONS

Steve Haynie  
713-336-5221  
[Steve.haynie@equistarchem.com](mailto:Steve.haynie@equistarchem.com)

Jeff Ngo  
281-862-5632  
[Jeff.ngo@equistar.com](mailto:Jeff.ngo@equistar.com)

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## Calendar of Upcoming Events - BIG NEWS - April meeting is now the 6th

Mark your calendars! Upcoming meeting dates are:

February 2, 2006	Process Safety Forum
March 2, 2006	TBD
April 6, 2006	Energy Forum - Most likely to be held at Brady's Landing
May 4, 2006	Awards night
June, 2006	Host National AIChE Leadership Conference

## From the Editor

One thing is for certain – the only constant in life is change. We have a new meeting location, the subject and dates of our meetings have been adjusted again, and it's time to turn all the calendars to a new year. It's a fresh start, yet another chance to batten down the hatches and brace ourselves for the changes that 2006 will bring.

Well now, that's a rather pessimistic attitude, isn't it? I detest change, personally. Yet if you believe the hype, change is what challenges us and helps us grow. Sure, looking back, I'm sure that is what we will think about it eventually. It still doesn't make it any more comfortable. I suppose it is one of the necessary evils of life.

But that's not what I wanted this column to be about. It **is** time to look forward to a new year, and I hope for you it is with a sense of hope and promise. Because a new year not only means new challenges, it also means new opportunities. It's all in how you choose to look at it.

I went to a training class where we covered Ethics. One question was, if you found you had a year to live, what would you do? Many people said things like spend more time with family, climb Mount Everest or go skiing one last time, or make up with that relative I've been feuding with. Those were all 'wrong' answers. The 'right' answer is, I would do nothing. The point is to Live Your Values. If family is truly what you value most, then that extra project at work should NOT take priority over Junior's Little League game. Making that extra bonus money should NOT be what you spend your entire weekend doing.

This one lesson ultimately had a profound impact on my life. I realized that either my values were out of whack, or my means of living was. If family really is my #1 value, what am I doing living 1000 miles away from them? I am grateful that I have the love and support of my entire family no matter where we all are. That frees me to pursue other dreams. I've succeeded in my goal to visit all 50 states by the time I'm 40. I journeyed out of the country twice to see my favorite singer (it's a long story, but he just won't tour in the US). And, of course, I've helped get the word out to 2000 members of AIChE about our monthly meetings. It was a great year, considering I started out believing unconditionally that my life was useless and I had nothing left to give (another long story).

I am not big into making New Year's resolutions. I usually break at least one by lunchtime. But I think it is a good time to look forward to the new calendar – 12 full months of opportunities – and wonder what I'll be able to do with myself this year. Professionally I have some pretty clear goals in mind. Personally, I want to build on the accomplishments of this year so that 12 months from now, I have just as much to be proud of and just as much optimism for 2007.

Susan Cannon, Editor

[SusanCannon119@aol.com](mailto:SusanCannon119@aol.com) or [newsletter@sts-aiche.org](mailto:newsletter@sts-aiche.org)

*Submit an article or idea! Include your name and contact information (phone, email, or fax). Anonymous submissions will not be accepted. Your company name may be omitted if you prefer. Entries may be edited for length and content (grammar, punctuation, etc.).*



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## Susan's Links of the Month

This month, I list some chemical engineering reference sites.

<http://tierling.home.texas.net>: From our own CAST workshop chair, Shane Tierling! Try it, it's great! And Free, too!

[http://www.public.iastate.edu/~pedro/cheme\\_tools.html](http://www.public.iastate.edu/~pedro/cheme_tools.html): Some unit conversions, MW calculator, Periodic Table, Chemical Abbreviations, and MSDS. Nice and simple.

<http://www.engineeringpage.com/>: The Engineering Page. More than just chemical engineering, has many useful calculations that we would use, like pressure drop and basic heat exchanger sizing. Check out the neat clock in the upper left corner!

<http://www.freecalc.com/>: FreeCalc. If you don't know about this site yet, you should! Easy to use, basic calculations.

<http://www.processassociates.com/process/tools.htm>: Process Tools. Online calculation tools.

<http://www.lmnoeng.com/Volume/CylConeSphere.htm>: Need a quick calculation for the partial volume of a cylinder or sphere? Here's your site!

<http://www.knovel.com/knovel2/Toc.jsp?BookID=48>: Perry's online. If your edition is well-worn and dog-eared, you may want to verify if anything has changed since yours was printed. A lot easier to carry around, as well.

<http://www.cheresources.com/indexzz.shtml>: ChE Resources. They try to get you to pay for additional features, but there are helpful 'free' features.

<http://www.askache.com/index.htm>: Ask A Chem E. I haven't had a need to use the service, but they do have good references to other chemical-related sites.

<http://www.geocities.com/CapeCanaveral/Launchpad/6504/Links.htm>: \*POPUP ALERT.\* Anything on Geocities (Yahoo) will have popups and ads, but this is a good collection of many ChemE sites on the web.

*NOTE: The South Texas Section does not endorse or promote any product, service, or site, including these. STS has received no revenue for this information. I provide these links for personal reference. -S.Cannon*

## Vital Links

Main South Texas Section site: <http://sts-aiche.org>

National AIChE website: <http://www.aiche.org/> (Needs Flash Plug-in)

Earn CEP credits at AIChE functions: [http://www.sts-aiche.org/Texas\\_PE\\_CEP\\_Rule.html](http://www.sts-aiche.org/Texas_PE_CEP_Rule.html)

Download the CEP log form: [http://www.sts-aiche.org/xls/STS-AIChE\\_CEP\\_Log.xls](http://www.sts-aiche.org/xls/STS-AIChE_CEP_Log.xls)

Update your contact information: <http://sts-aiche.org/memberinfo.htm>

Previous Newsletters (PDF format): <http://sts-aiche.org/newsletter/newsletter.htm>

Link to THIS newsletter: [http://sts-aiche.org/newsletter/news\\_06/news0106.pdf](http://sts-aiche.org/newsletter/news_06/news0106.pdf)

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The screenshot shows the 'Flash Calculations' window with the following data:

Name	Mole Frac.	Flow rate, lb/hr		Composition, Mole Fraction		K Value	E1 Value		
		Vapor	Liquid 2	Vapor	Liquid 2				
PROPYLNE	0.0001	17.28	0.38	0	0.76418	0.00002	10.0000	414.8120	
WATER	0.0000	4.85	3.04	0	0.05948	0.00000	1.0000	1.2186	
METHANE	0.75	40.30	4.08	0	0.42730	0.48375	0.07204	10.7900	345.4948
Ethane	0.2499	19.69	3.14	0	0.18862	0.22284	0.00439	5.42147	434.8065



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### SOUTH TEXAS SECTION MISSION STATEMENT

As a section of AIChE, we serve chemical engineering professionals in the South Texas region through education, professional development, and networking.

### Vision 2008

We will become an organization with a strong and active membership. We will accomplish this through:

1. Increasing awareness of the South Texas Section of the AIChE
2. Improving relevancy of our programs
3. Improving our governance
4. Hospitality/Welcome/Social

*The South Texan* is issued monthly, except June, July and August, by the American Institute of Chemical Engineers, South Texas Section. Opinions expressed are those of the authors and not of AIChE. The newsletter is published electronically.

### — SUBSCRIBE/UNSUBSCRIBE INFORMATION —

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### — MAINTAIN YOUR CONTACT INFORMATION WITH STS —

Maintain your contact information with the South Texas Section using the online community:

<https://www.memberconnections.com/olc/pub/CHM/>

To update your information, log in, then select Member Directory.

Select the link to View/Update Your Online Directory Listing.

Contact the New York office for PERMANENT ADDRESS CORRECTIONS:



[xpress@aiiche.org](mailto:xpress@aiiche.org)



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## ***The South Texan Newsletter Crew***

WHAT DO YOU THINK OF THE NEWSLETTER? We want to know!

Contact us at [newsletter@sts-aiche.org](mailto:newsletter@sts-aiche.org) with comments, questions, suggestions, and ideas for next month.

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