

Volume 40, No. 4
December 2004

Quaker City CLIMATE

JOURNAL OF THE PHILADELPHIA CHAPTER OF THE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS, INC.

PHILADELPHIA CHAPTER

AIR SYSTEMS & MEMBERSHIP PROMOTION DAY

Thursday, December 9, 2004
at 8:00am

Breakfast Presentation

“Dedicated Outside Air System (DOAS)”

Presented by

*Rick Galie
Air Tectonics, Inc.*

Free Breakfast!
For New Local Members
Who Joined July 2004 and After

The Philadelphia Chapter also invites all local chapter members who are in transition to be our guest at the December Breakfast Meeting.

**Please contact Hope at 610-971-2169 and
let her know you will attend as our guest.**

Seasons Greetings!



STRENGTHEN OUR MEMBERSHIP!

Ask for a Membership Application at
our Events' Reception Table

Pass it along to a Friend
or Colleague!

LOCATION

Holiday Inn
City Line Avenue
(next to the Adam's Mark Hotel)
4100 Presidential Blvd.
Philadelphia, PA 19131

Hotel Parking Lot Available

FOR RESERVATIONS

Call (610) 971-2169

Or Email

hope@multiservicemgmt.com

RESERVATION NOTICE

Reservations must be made by
no later than 12:00 Noon
2 days prior to the meeting date.

COSTS

Local Chapter Members Reservation
\$18
Late Registrations & Walk-ups
\$30
Non-local Dues Paying Members
\$30
Student Members
\$10

Reservations not cancelled by 12:00 noon
2 days prior to the meeting date will be
billed the full amount.

The Chapter will no longer
bear the cost of “no-show” meals.

President's Message

Dan Pettway is the Assistant Regional Chairperson for ASHRAE Region III. He is an passionate and engaging man about our society. In a recent article for the regional newsletter, The Regionare, he talked about getting involved in ASHRAE at the grass roots level. His main points were:

- Communication
- Enthusiasm
- Motivation
- Leadership

Our ability to communicate is easy and effective in this technical age. But it still is a two-way street of speaking and listening as well as reading and writing. Our Climate is now sent via e-mail and that has enhanced the time and effort to get the word out to you. And in turn, you can quickly give us feedback on your thoughts. I received a couple of comments about the last Climate and they were taken seriously by the Board.

Nothing is more enjoyable than working with a person who loves what they are doing. Enthusiasm is infectious and there is no known inoculation. Try it! Spread it through the chapter.

As a college professor, I have observed that students are best motivated by food, money and awards. In our professional career, I think that we still keep these basic needs, but rapidly changing technology and the competitive work place take over as our prime motivation.

Good leadership is vital to any professional organization. And encouraging and mentoring new leaders ensures a successful future for the Chapter.

The members of the Board of the Philadelphia Chapter make every effort to communicate to you and we welcome your feedback. We have carefully developed a calendar of events to keep you interested and informed. And we are always looking for committee chairpersons and future board members in order to serve you well.

Steve Ridenour

College of Engineering
Temple University
215.204.8825
steven.ridenour@temple.edu

Volunteers Wanted!

Your Philadelphia Chapter officers are asking for your help in leading the chapter's efforts as a resource to the HVAC&R community here in the Delaware Valley. The chapter has needs for both one-time and ongoing commitments. The following list highlights some specific areas in which we need help:

Membership Promotion Committee:

We are looking for committee members to help promote ASHRAE membership amongst HVAC&R professionals.

Chapter Technology Transfer Committee:

Members of this committee help provide technical resources to our membership, and facilitate the sharing of useful information with other chapters. We desperately need someone to chair the sub-committee that will solicit entries from our local members for Technology Awards. ASHRAE Technology Awards are used to recognize innovative designs at the regional and national level.

Student Activities Committee:

Members in this committee help increase ASHRAE involvement in local schools and universities. The following are some specific objectives this year:

1. Establish new student chapters at local universities and technical schools
2. Participate in the Future Cities Competition (volunteers needed as mentors, judges, and coordinators)
3. Arrange speakers for local K-12 schools during National Engineering Week

If you have an interest in one of these areas, contact Volunteer Chairman Jay Halsey at jayhalsey001@aol.com.

**Check
www.ashrae-phila.org
for further information
on the
Philadelphia Chapter!**

Tech Reader's Corner

A perspective on engineering ACTION

By Reynold Pratt

The physicist Richard Feynman explains Quantum Electrodynamics (QED) as the study of the interaction of light and matter engaging three prevailing laws of physics that are: 1) photons (unit of light) move from place to place, 2) electrons (unit of electricity) move from place to place, 3) electrons absorb and emit photons.

Without these 3 laws nothing that you experience (including HVAC engineering!) would be, so, in this view, ACTION is intrinsic to physical beings. Human activities reflect that restless ACTION of these 3 laws. Further extension on these laws prove that for law 1; two (2) photons can occupy the same space-time coordinate, something like being republican and democrat at the same time, and law 2, two (2) electrons more like combatant republican and democrat repel each other since they have the same negative charge.

So, where is our latest election with respect to these *analogies* by extension of: law 1) republicans and democrats in the same zone, or law 2) republicans and democrat partisanship?

It must rest with the third law since photons create the ACTION for electrons to race with a fair balance of give and take - like a bipartisan congress. ACTION therefore presupposes UNITY (all things being equal as one infinity of things), is there inevitability for our political system of the future, perhaps, is a better question to reflect on.

Hold it, what, democracy is best when there is tension of competing ideologies, it forces productivity of thoughts, creative ideas, etc., some of you may be saying to yourselves. How can UNITY replace conflicts, well, it is the same as philosophically asking can absolutism (God) be done away with for relativism (beings)? Our latest election results show that moral values in the absolute sense elevated by global conflicts superceded liberal ideals (relativism), so, physical laws had a playing hand in this election

What does it all mean, are democrat losers and republicans winners? Actually, until both sides get together to create meanings such as: ending poverty, promoting the welfare of all (something like we engineers like to do), spreading out humanity to all beings, etc. there are no winners. Winning is to know when to give and when to take. Let us all get back to our *engineering* work.

Breakfast Presentation Thursday, December 9, 2004

“Dedicated Outside Air Systems (DOAS)”

The program will review the application of various dedicated outside air system types to achieve humidity and temperature control, energy savings, cooling and heating connected load reductions and indoor air quality.

Alternative system designs to the traditional chill and re-heat humidity control systems and their benefits will be presented. These systems are suitable for direct ducting to the space or to the return airside of unitary devices.

**Presented by
Rick Galie
Air Tectonics**

Our presenter, Rick Galie, has been a familiar face as speaker with the Philadelphia Chapter of ASHRAE since 1987. Rick is a principal and co-founder of Air Tectonics, a respected manufacturer's representative in Bucks County, PA specializing in laboratory exhaust, custom air handling, air-to-air energy recovery, humidification, and dehumidification equipment. Air Tectonics has applied equipment from numerous manufacturers on hundreds of projects in the Philadelphia area since 1987.

Check the Calendar at

www.gpbpa.org

for further information

on events for

DVGBC, ASPE, SMCA,
and other organizations!

!! NEW !! AFFILIATE MEMBERSHIP GRADE

For an Annual Dues of \$40, Applicants under Age 30 can Join ASHRAE at this introductory membership level. Membership tenure in this grade is limited to three (3) years.

Affiliate Members Benefits Affiliate Members receive monthly issues of the ASHRAE Journal and Insights Newsletter. The annual handbook is not a benefit of this grade.

Qualifications

An Affiliate Member shall have the same qualifications as an Associate Member. They are:

1. Experience in technical matters or in design, operation, or maintenance in heating, refrigerating, air conditioning, or ventilating fields.
2. An interest in the in the advancement of the Society's aims.
3. Possess sufficient qualifications to cooperate with heating, refrigerating, air conditioning, or ventilating engineers in the advancement of relating to heating, refrigerating, air conditioning, or ventilating engineering and its application.

Limitations

- You do not receive ASHRAE Handbook with membership. You do not receive *ASHRAE Insights*. You get a one-time discount (20% off) on all Handbook items.
- You can serve on Chapter committees, but cannot hold office or vote at Chapter, Regional or Society level.

Contact For Receiving Application

Go to www.ashrae.org and click on "Join" in the upper right corner. This will take you to a page describing each membership grade, its benefits and qualifications, and a link to membership application forms.

A membership application form is also included with this newsletter.

MEMBERSHIP ADVANCEMENT!

Any Associate Member meeting the following requirement can apply for Advancement to the more entitling Member grade. By ASHRAE society definition:

A member shall have the equivalent of twelve society-approved years of experience composed of an approved combination of: (a) completed education beyond high school, (b) work experience, and (c) professional engineering or related registration or license issued by a legally authorized body.

All technical and scientific education shall be based on curricula approved by the Board of Directors.

Approved engineering curricula shall be equivalent to the accredited by the Accreditation Board of Engineering and Technology in the United States of America or the Canadian Engineering Accreditation Board. Scientific education in fields other than engineering shall be from a college or university course of study that has been accredited by an organization charged with monitoring standards of performance. *Society approved years of experience shall be credited as follows:*

One and one-half years of credit for each year of completed education for graduates of approved technical curricula. One year of credit for each year of education for non-graduates who have completed a least two years of approved technical curricula. One year of credit for each year of completed education for graduates of colleges or universities which do not have accreditations. Those holding associated degrees from technical institutions shall also be credited for one year for each year of education.

One year for each year of qualifying work experiences in the performance of duties in work related to ASHRAE fields of interest and shall have included research, teaching, design, contracting, engineering sales or engineering management.

Three years of credit for professional registration of license issued by a legally authorized body in engineering or related fields, the requirements of which as to education, examination, and active practice are satisfactory to the Board of Directors.

More information is available on the ASHRAE website (www.ASHRAE.org) under menu items Membership Resources...Manage Your Membership, the above definition is extracted from such application information in PDF file format. The application can also be filled interactively online. ASHRAE sends members who upgrade a \$20 gift certificate usable at the ASHRAE bookstore or towards ASHRAE membership renewal.

Penny Savvy, But Pound Foolish?

By Shawn R. Farrell, Esquire

Imagine you are a subcontractor that has experienced delays to the timely performance of your work. You have submitted numerous letters to the general contractor explaining the delay, your intention to seek more money and a request for an extension of time. But the owner has not yet agreed to pay you any additional money or give you an extension of time. As you wait for a response, the general contractor wants to give you a partial payment for the work previous performed, however, he demands that you sign a "Waiver of Liens and Claims." Do you sign it? Lien waivers, as their name applies, pertain to lien rights and historically do not speak to the more general right for payment. While making periodic payments, the cautious prime contractor may want protection against its subcontractor's failure to flow money down to its employees, suppliers, lower tiered subcontractors and a host of other potentially troublesome creditors of the subcontractor. The general contractor may use this as justification for the subcontractor to sign a waiver. But as our hypothetical suggests, things may not be as simple as they seem.

The problem arises when the subcontractor is owed additional money and the owner or general contractor disagrees. By signing a waiver of liens and claims, the subcontractor may lose its right for additional money. In fact, a recent federal court case held just that. In ILM Contractors, a drywall subcontractor was requested to perform additional work after the project had been delayed for one (1) year. As required by the contract, the drywall subcontractor signed waivers, in order to receive partial payment for the additional work. In addition, the drywall subcontractor sent periodic letters explaining that the change orders did not include all the costs that arose from the delay, additional money was owed which was impossible to quantify until the end of the project. At the end of the project, the drywall subcontractor sued the general contractor, seeking delay damages. Astonishingly, the court found that the drywall subcontractor waived any claim for additional monies by signing the waivers. The fact that it sent letters to the general contractor notifying it of the additional money claimed was immaterial. What the drywall subcontractor had waived could not be recaptured through a letter. So what is a contractor to do? If you do not sign the waiver of liens and claims, you do not receive the partial payments. If you sign the waiver of liens and claims, you may not be able to pursue any additional claim for money

at the end of the project. Well, here are a few helpful suggestions:

- First, strike from you contract any obligation to sign a waiver of liens and claims as a condition precedent to the receipt of a partial payment.
- If this can't be done (or if its too late to do so) strike from the waiver itself any reference to "claims for any contract balance or credits owed for any labor or material provided pursuant to the subcontract work." Initial these strike outs along with signing the waiver.
- If neither of these steps are possible, send with the waiver a letter that clearly states that you do not release or waive any claim for additional consideration arising out of delay, acceleration or pending change orders.
- Finally, comply with all notice requirements in the contract and state, in writing, that pursuant to the terms of the contract, you are putting the contractor on notice of a claim for additional money. If possible, state the amount of the claim.
- The lesson to be learned is that while you may need the partial payment to meet your payroll obligations, pay your suppliers - there can be negative ramifications from signing a waiver of liens and claims. Bear in mind, when you sign such a document - you are altering the terms and conditions of your contract. So make sure that waiver says exactly what you and the general contractor have agreed upon. Failure to take this simple step may prevent you from getting paid for all the work you performed.

Mr. Farrell is a Partner at the law firm of Cohen, Seglias and concentrates his practice in the area of construction law. Feel free to contact him with any questions at 215 - 564-1700.

PHILADELPHIA CHAPTER ASHRAE 2004 - 2005 PROGRAMS

For reservations and updates, check www.ashrae-phila.org.

Date	Location	Pre-Dinner Topic	Dinner Topic	Theme
Dec. 9 Thursday	Holiday Inn	Dedicated Outside Air Systems	<u>Breakfast</u>	Air Systems & Membership Promotion
Jan. 13 Thursday	Colleen's	Commissioning	LEED Requirements	LEED / Joint Meeting with DVGBC
Feb. 10 Thursday	Colleen's	SMCA TBD	ASHRAE Distinguished Speaker	Joint Meeting with SMCA / Student Night
March 10 Thursday	TBD	Table Top Show	Panel Discussion	Research / Joint Meeting with GPBPA
April 14 Thursday	Colleen's	90.1 Controls	Control Logic	Past Presidents Night / Controls
May	Citizen's Bank Ballpark	Tour	Phillies Outing	Joint Meeting with GPBPA
June	Temple University		Planning Meeting	2005-2006

Drexel University Plasma Laboratory Tour

by Reynold Pratt

Putting out fire with kerosene is no more a contradiction from normal experience - that is to say the least of the cold plasma research work in progress at Drexel spearheaded by Dr. Fridman.

Dr. Fridman is a pioneer in the field with a career in plasma studies stretching over 30 years. From Russia, France, the state of Illinois, and now at Drexel Dr. Fridman is pushing the envelope for developing practical engineering applications in this promising field.

The research team comprises 16 professors plus graduate students receiving grants from private industries and government agencies like the DOE, and Homeland Security. ASHRAE funding is not yet available to this group, but the interest for the ASHRAE community should involve research funding not too soon enough for this group under Research Promotion efforts.

Dr. Fridman explained that plasma is an ionized medium, and it is categorized for its many applications as: Thermal, Non-Thermal, and in between as Gliding Arc. The Non-Thermal approach is of interest to HVAC filtering applications for air cleaning, and sterilization. This is what he calls "cold plasma", in his words: unlike lightning it is cold. Therefore, cold plasma takes place at standard room pressure. The plasma is cold because a very low concentration of electrons (10^{-6}) achieved energy of 2 eV (20,000 °C) from a mole volume (10^{23}), let's say.

An experimental setup for Homeland Security to determine cold plasma applicability for destroying 'weaponized' viruses (micron size smaller for surface cohesion) takes place as an interconnected unit to a duct system. One of the graduate student explained that as air passes through a plasma filtering system (resembling a tooth comb of wire string electrodes) with no effect for loss pressure, OH groups are formed attacking the organisms at its surface walls allowing short-lived ozone (O_3) from the chemical reactions to penetrate the inner sanctum of the organism and break down the chemical bonds of its proteins and DNA strings. There is no danger of the ozone reaching occupied areas.

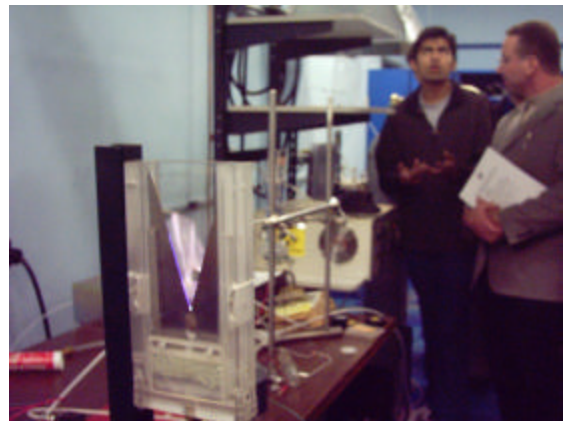
Dr. Fridman spoke of other applications for volatile organic compounds (VOC) destruction noting that the energy spent is proportional to the amount of pollutants and for application with low concentration of VOC such as oriented board (OSB) for home building, it is a worthwhile



Dr. Alex Fridman briefing the group.



Local ASHRAE participants.



Cold Plasma Arc Demonstration (Air from below pushes plasma arc upward traveling the widening gap of electrodes.)

energy wise effort. Drexel has a mobile laboratory set up on a 48 ft length flat bed truck designed for the purpose of going where needed to rid sites of VOC pollutants.

Other indirectly related very low-pressure plasma applications to HVAC are in electronics; computers, wireless, etc. This is a complex field of research and anyone interested in obtaining more information could contact Dr. Alex Fridman or his colleague Dr. Alexander Gutsol at the Drexel Plasma Institute.

Mentors Needed for Future City Competition

We have 38 schools signed up and 10 that need mentors for the Philadelphia Regional Future City Competition. For the complete list of registered schools, please visit our website at www.futurecityphilly.org.

- Andrew Jackson Middle School, *Philadelphia, PA (South)*
- Governor Mifflin Middle School, *Shillington, PA*
- Indian Valley Middle School, *Souderton, PA*
- MaST Community Charter School, *Philadelphia, PA (Far Northeast)*
- Morrison Elementary School, *Philadelphia, PA (Olney)*
- Shaw Middle School, *Philadelphia, PA (Southwest)*
- Spring Lake Heights Middle School, *Spring Lake Heights, NJ*
- Stetson Middle School, *West Chester, PA*
- Warren G. Harding Middle School, *Philadelphia, PA (Frankford)*
- Widener Memorial Middle School, *Philadelphia, PA (Fern Rock)*

All schools are diligently working on their computer models and starting work on their scale models and essays. Every school needs an engineer with some real world experience to make their city stand out. If there is a school on the list above that you'd like to help, please let me know and I'll get you in touch with the teacher.

Are you not able to be a mentor, but would like to volunteer at our Regional Competition (scheduled for Saturday, January 29 at Villanova University)? Please visit our website for more information and to sign up online.

If you've already signed up this year, thank you.

Jennifer Wetzel
Philadelphia Regional Volunteer Coordinator
University of Pennsylvania
P 215-573-3935
F 215-746-6606
E jwetzel@pobox.upenn.edu

Your Research Donation is Matched \$ 1 for \$ 1

Your donation to ASHRAE Research is matched \$1 for \$1 by the ASHRAE association. Please be as generous as you can by filling out the enclosed Donor Form on the next page and sending it to Atlanta per the instructions.

Thank you for your help.

Jay Halsey
Research Promotion Chair

Research Promotion Efforts

Let us all congratulate Jay Halsey as the Philadelphia Chair of Research Promotion for leading all Region III Chapters to date in raising awareness for this important society activity measured by dollar contributions from corporate, university, and individual donors.

Bradley E. Lowe, Region III Vice Chairman, reports that Region III has to date collected \$35,520 toward ASHRAE Research. The annual goal is \$136,247, so we're at 26% of the way. He writes this is a: "Great start!"

Moreover, to end with the RVC's comment, we say once more:

"Congratulations to Philadelphia! Jay has been working hard to send the ASHRAE Research message to the local businesses and universities (alumni) and has collected \$11,675 to date! Great work Jay!"

Let us all continue to help contribute for this effort and help Region III meet this 2004-2005 year goal. Donor forms are inserted in this newsletter on the next page. Please use them.

Reynold Pratt
Editor

ASHRAE RESEARCH - Donor Form Philadelphia Chapter 21 - Region 3

1) Type of Contribution;

- ☐ Individual
☐ Corporate
☐ Memorial To: _____
Please attach the details for the acknowledgement to,
relationship to, and addresses.

2) Level of Contribution;

- ☐ Golden Circle (\$10,000 and greater)
☐ Research Partner (\$5,000-\$9,999)
☐ Research Associate (\$2,500-\$4,999)
☐ Research Major Donor (\$250-\$2,499)
☐ Research Honor Roll Donor - Individual (\$100-\$249)
☐ Research Honor Roll Donor – Corporate (\$150-\$249)
☐ Research General Donor (Less then \$100 Individual/\$150 Corp.)

3) Method of Payment;

- A) Attach Check (Payable to “ASHRAE Research”)
Please note on check “Phila- Chapter 21”

- B) Credit Card

☐ Visa ☐ Master Card ☐ AMEX

Date: _____ Signature: _____

Card #: _____ Exp. Date: _____

Note: All contributions are fully deductible under section 170 of the IRS code.

4) Donor Information:

Name: _____

Member # (If ASHRAE member): _____

Corporation Name (If Corp. Donation): _____

Address: _____

Phone : Home: _____ Business: _____

E-Mail: _____

5) Send this completed form to:

**ASHRAERESEARCH
1791 Tullie Circle, NE
Atlanta, GA 30329**



The Greater Philadelphia Chapter of The Association of Energy Engineers

APPLICATION FOR FEBRUARY 24, 2005 TRADE SHOW/STUDENT JOB OPPORTUNITY NIGHT BEING HELD AT THOMAS JEFFERSON UNIVERSITY

Name: _____ Title: _____

Company: _____

Address: _____

Phone: _____ Fax: _____

Email: _____ Case Sensitive? Y / N _____

Would you be willing to speak with students about potential future employment? Y / N _____

Would your company have an HR person at the show to discuss job opportunities? Y / N _____

Trade Show Details:

- Vendor Table Fee: \$100 per table
- Trade show table location is on a first-come, first-select basis
- Anticipated number of attendees: 175 -225
- Anticipated number of vendors: 20 - 25
- Venue: Thomas Jefferson University – Alumni Hall (1020 Locust Street), Philadelphia PA
- Date: Thursday, February 24, 2005
- Time: 3:30 pm to 8:00 pm
- Beverages: Keg of Beer, Boxes of Wine, Soda, Coffee
- Food: Cold platters

Make Checks Payable to “Greater Philadelphia AEE” and remit to:

Mr. John Zuk
c/o Philadelphia Gas Works
800 W. Montgomery Avenue
Philadelphia, PA 19122

Not for Vender Application's use:

AEE Board Member Forwarding the Application: Jim Clark (610) 325-9229 ja11clark@aol.com

Corporate Sponsor Bios

Bush Distributors, Inc.

Bush Sales Associates

Since their inception as a stocking mechanical rep organization over 41 years ago, Bush specializes in the distribution of ventilation, air control, VAV, air distribution, energy recovery, make-up air and humidification equipment throughout the tri-state area. With two major stocking locations in Philadelphia and LeMoyné, PA, Bush has substantially increased their capacity to better serve the HVAC trade.

The Bush organization has focused its business philosophy on marketplace distinction as a primary strategy, while making excellence at all levels of service an ongoing commitment to its valued customers. The company is devoted to not only satisfying the diverse needs of the contractors in their trading area, but, even more importantly, trying to help contractors deal with the many challenges that face our industry.

Bush's inside and outside sales force work together as one professional team while maintaining the highest standards. Trained in virtually all areas of the business as market leaders, their sales team is committed to partnering with their customers in order to create and maintain value added relationships for all concerned. Combining many years of experience and knowledge with a commitment to value added service, Bush has created a unique environment that helps the contractor meet plan and spec applications and design build requirements in virtually all aspects of various fields of expertise. This is further reinforced by Bush's continuous efforts to integrate, expand and enhance the distribution and wholesale part of the business with their plan and spec division raising both so that a newer and higher standard in the industry has been met and surpassed. This process is now being enhanced by the establishment of Bush Sales Associates focusing exclusively on plan & spec sales and HVAC mechanical sales.

Bush's representation of the industry's premier manufacturers has helped their organization meet the many challenges facing contractors today, while simplifying the process of doing business through the means of cutting edge technology. Incorporating a team effort at all levels, Bush can offer consulting engineers a viable option to specify with complete confidence, as well as offer the contractors a credible source for meeting the critical demands of today's construction schedules promptly and

accurately. Their vision is continually to strive for excellence in becoming the premier stocking mechanical rep organization in the tri-state area, unique in their ability to serve the HVAC industry.

They continue to redefine themselves as they work towards becoming a complete source and solution, for both the contractor and engineer, in meeting the challenges of tomorrow with vision and excellence.

Visit them on their web site at www.bushdistributors.com.

M.P. Hershman, PE, Incorporated

M. P. Hershman, PE, Incorporated is a full service consulting engineering firm specializing in the design of heating, air-conditioning, ventilation, plumbing, electrical and fire protection systems. Its clients view the company to have diversified skills and experiences and able to handle the most challenging projects. New construction or renovations, commercial, industrial, institutional and residential are all within the scope of available services.

With contributing experience in the design/construction and testing and balancing industries, the firm's reputation for developing practical, cost effective designs is well known in the tri-state area.

Mark Hershman has over 35 years experience and has been a professional engineer since 1973. He is registered in seven states and is a past President of the Philadelphia Chapter of ASHRAE.

Visit their web site at www.hershmanconsulting.com.

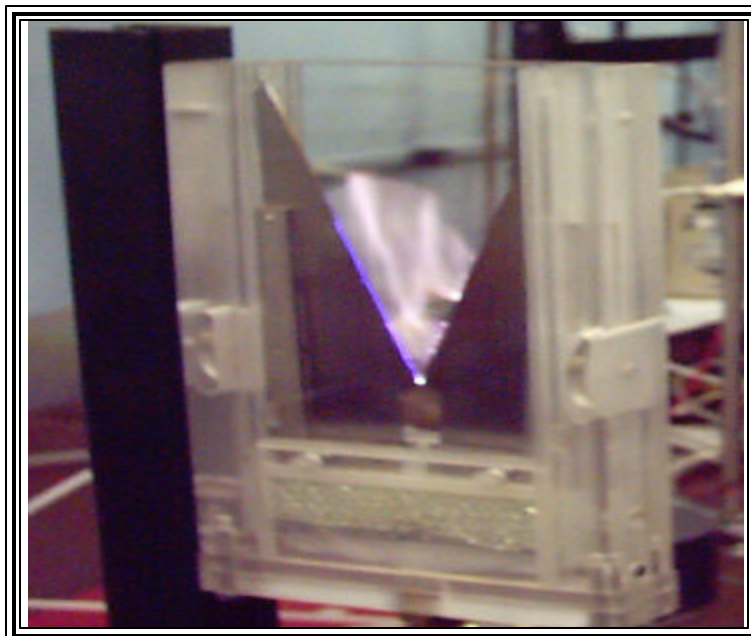
It's not too late!

Your company may still take part in our Corporate Sponsor program. Have your company featured in our newsletter, on our web site, in our directory, and receive dinner tickets for our monthly meetings.

Call Hope Silverman at 610-971-2169 or email hope@multiservicemgmt.com for further details.



Limit Out



Bounded

Member Services

Members who would like stay on top of the latest news from ASHRAE may join the News Release List Serve at <http://www.ashrae.org/template/AboutLinkLanding/category/1584>.

If you or your company are hiring, please take a moment to review the resumé of chapter members and students which have been posted on the chapter website at www.ashrae-phila.org/resumes.html.

Any member who wishes to have their resumé posted on our website, or who would like to update it, can email our webmaster, Seth Weiss, at sweiss@comcast.net. The file must be in pdf format and will be posted for 3 months.

For Video Resume And Job Opportunities, visit online portal: www.LookFirst.net

Check the Calendar at
www.gpbpa.org
for further information
on events for
DVGBC, ASPE, SMCA,
and other organizations!

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ashrae-phila.org

Republication of material contained herein
is expressly forbidden without official Chapter authorization.
The Chapter does not speak or act for the Society.
Any member with material to submit for inclusion
in the *Climate* can send the information to:



Reynold Pratt
23 A Riverhill
New Hope, PA 18938
or email: rpratt@comcast.net
or call: 215-862-5304
or fax: 215-862-5304

Material can include letters to the editor,
member news, upcoming events,
comments on chapter programs or issues, etc.

This is your newsletter.

We welcome your input and comments.