Message from Chapter President...

In April we had our Spring Technical Seminar which was very informative and a great success. Thanks to all the presenters and those who attended this educational all day event.

The upcoming May meeting presentation will involve the Tyco Fire Protection Equipment Demonstration Trailer at the Hanover Manor, our normal monthly meeting place. If you are not in the business of hands-on equipment installations here is your chance to come out and play with some big toys. Don’t exactly know just how that deluge valve works when it trips? Well now is your chance to become intimately involved with the equipment. And you won’t get your face slapped, although you may get a little dirty. This will be a “jeans” meeting so it’s OK to dress down a bit. Don’t miss it !!!! You might even learn something along the way.

Reminder to all, the annual Scholarship Fund Golf Outing is Monday June 26th at West Point Military Academy, NY. Get your names in today to ensure your space at the “T” box. Also we are still looking for hole and T sponsors. See attached applications for more info. See you all at the meeting.

Rich Reitberger,
Chapter President
Smoke Detection in Dusty, Dirty and Wet Environments
Fred Conforti, President
Pittway Systems Technology Group

The following paper has been taken from the Fire Suppression & Detection Research application symposium sponsored by the Fire Protection Research Foundation

ABSTRACT
Harsh environments have presented problems for smoke detectors since they were introduced. Harsh environments can include dusty, dirty and wet environments, but can also include other types of environments such as corrosive or salty environments. Smoke detectors have not been used in dusty, dirty or wet environments because of the generation of false alarms due to the air-borne stimuli.

A new sensor technology has been developed which could work in dusty, dirty and wet environments. How well this technology performs had to be tested through actual field usage. Dozens of difficult environments were selected to test the performance of this newly developed technology. The selected difficult applications ranged from flour mills to cola mines to truck washes. The results were logged over a one-month to one-year time period, and are summarized in this report. The new technology gave a more than adequate performance in all of the environments in which it was tested.

THE FILTREX DETECTOR TECHNOLOGY
Dirt, dust and water particles in the environment can look or act like smoke. Dust floating in a photoelectronic chamber will look like smoke. Dirt collecting inside of a photoelectronic chamber will increase the light levels in the chamber and eventually look like smoke, and water particles combined with dust or dirt in a chamber can create leakage paths that can trick the electronic into an alarm condition. In order to prevent these situations, a detector must filter out dust, dirt and water, but not filter out smoke particles. The Filtrex detector technology can do this because it has been determined that dust, dirt and water droplets are much larger than smoke particles. Smoke particles range from 1/10 micron to 10 microns in size, while dust, dirt and water particles are typically greater than 20 microns.

The Filtrex detector technology uses an aspiration means to move the air through the sensing chamber. The sensing mechanism is a photoelectronic smoke detector. The major difference between it and other smoke photoelectronic detectors is that all of the air being sensed by it is filtered. There are actually two filters: a permanent filter and a removable filter. The removable filter is a pre-filter that can be cleaned or changed when it gets dirty. The hole sizes in both filters are approximately 20 microns, which make them approximately 25 times smaller than the openings in a standard smoke detector bug screen. This adequately filters out dust, dirt and water particles.

The aspiration element has moving parts and is therefore monitored to assure its continued operation. The filters can ultimately get clogged, but are monitored to assure that air and smoke are still getting through the filters. A trouble signal is given if either the aspiration stops working or the filters get plugged.

The detector is cycled on and off so that its average current draw is low. It is UL listed and passes all UL large-scale fire tests.

IN-HOUSE TESTING
Extensive in-house testing of the Filtrex detector technology has been carried out. This has included a series of “dust test” experiments, a kerosene black-smoke test, and various tests to evaluate the performance of the circuitry that reports on the filter’s degree of clogging and the performance of the aspirator.

Dust Tests
Tests were run to determine how much dust and smoke the filters removed. The Filtrex detectors were tested first for cotton wick smoke sensitivity in a standard UL smoke chamber. Then a Filtrex detector was compared to two standard photoelectronic detectors. All detectors reached a similar level of obscuration within the same time frame, although it was determined that the Filtrex detector did filter out 16.7% of the dense wick smoke. In a second trial, the same devices were exposed to a cotton linters sensitivity test with an airflow of 300 ft./min. While the standard photo chamber detectors quickly reached alarm level, the Filtrex detector filtered out 89.7% of the cotton linters without reaching the alarm level.

In a third test, sodium bicarbonate was introduced into the smoke box with an airflow of 300 ft./min. Both control devices immediately reached the alarm level, while the Filtrex detector was able to filter out 80% of the dust without going into alarm.

Another test, called an Arizona dust sensitivity experiment, yielded similar results, with the control devices reaching alarm levels quickly, and the Filtrex detector filtering out 78% of the dust, without going into alarm.
**Clogged Filter Tests**
The ability of the unit to report the condition of its filters is very important. An internal sensor monitors the airflow coming into the Filtrex detector to show the degree of clogging of the filters, which it reports back to the system panel. Tests were conducted on 30 Filtrex detectors with deliberately blocked filters in place to evaluate the performance of the monitoring circuit as clogging increased and airflow decreased. After calibrating the sensor by measuring its voltage, each detector was tested at 15% blocked, 20% blocked, etc. until the sensor determined the filter had reached its clogged threshold and issued a trouble signal. The ideal threshold at which the detector reported clogging was determined to be 25-30%. However, these tests also showed that the detectors were still able to detect with filters being 50% clogged.

**Temperature Tests**
Tests were conducted on the Filtrex detectors to determine whether ambient temperature had any effect on the performance of the airflow sensing circuitry. Tests showed that even as low as 0°C, and as high as 50°C, the circuitry performed accurately.

**Mist Performance Tests**
The Filtrex detector was tested side-by-side with a standard photoelectronic detector to compare performance in the presence of water mist. First, both detectors were mounted in a closed cabinet and subjected to water spray (misting). The standard photoelectronic detector indicated an alarm, while the Filtrex detector did not. Second, a smoldering cotton wick was added to the cabinet while the same mist conditions were present. The Filtrex detector was able to detect smoke and issued an alarm. This demonstrates very clearly the ability of the Filtrex detector to filter out the effect of ambient mist and detect the presence of smoke in an environment in which a standard photoelectronic detector is unable to distinguish between smoke and mist.

**BETA-SITE TESTING**
Once in-house testing was completed, beta-site tests were begun. A wide variety of sites had been selected around the world. The sites were chosen primarily for their inhospitable conditions, including such challenges as mines, truck wash bays, food processing factories and mills. The following is a sample of the test results which are on-going.

Filtrex units were installed over a period of 10 months from February, 1998, to November, 1998. Our most comprehensive data comes from the older installations. One example comes from an air handling room in a Wisconsin facility that previously experienced false alarms from photoelectronic and ion detectors because of paper dust drawn in from an adjacent computer room where paper bursting occurred. Installed in March of 1998, an inspection 12 months later indicated that the filters remained unclogged, and that there were no unwanted alarms. However, during this year, a fire due to an overheated motor bearing was detected!

A major Canadian telecommunication company installed a unit in an area currently under construction. Previous photoelectronic and ion detectors had repeated false alarms. Inspection confirms that there have been no false alarms to date in this dirty and dusty environment where welding and construction dust and debris are pervasive. Welding had even been done in the area with no false alarms.

Overall, in a survey of the 14 test sites selected were beyond the reliable capabilities of standard smoke detectors. The filtered, asphated technology performed well.

Here is positive confirmation that industry recommendations regarding strategic placement of detectors with respect to particular equipment is of prime importance to effective operation of all types of detectors. Once the placement was modified, clients expressed satisfaction with the detectors. Eight sites indicated that older, standard detector technology had false alarmed many times, but that there were no problems with the Filtrex installations. The other six sites hadn’t installed smoke detectors before because it was expected that they would not work.

**CONCLUSION**
Filtered, aspirated smoke detectors provide an expansion to the types of applications in which smoke detectors can be used. The 14 test sites selected were beyond the reliable capabilities of standard smoke detectors. The filtered, asphated technology performed well.

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**NJ Chapter Golf Outing to Benefit the Scholarship Fund**

The NJ Chapter is sponsoring the annual golf outing at West Point to be held on June 26. The profits from this event will go to the scholarship fund that encourages college students to enter the field of Fire Protection. Additional information on this worthy event and sign up form is attached.
2005-2006 New Jersey SFPE Nominations for Officers and Directors

In compliance with the Nomination Section of the Constitution and By-Laws of the New Jersey Chapter of the Society of Fire Protection Engineers, The Nominating Committee submits the following slate for Offices and Directors. The election will be conducted at the next Annual Business Meeting, scheduled for Monday June 12, 2006, at the Hanover Manor.

President          Glenn Deitz
First VP           Dave Gluckman
Second VP          John Cholin
Secretary          Ed Armm
Asst. Secretary   Brad Hart
Treasurer          Bob Murray
Asst. Treasurer    Richard Ravaioli

Chapter Member Glenn Buser is nominated for his first two-year term 2006-2008 as a member-at-large on the Board of Directors.

Chapter Member Vinny Fichera is nominated for his second two-year term 2006-2008 as a member-at-large on the Board of Directors.

Chapter Members John Warnet and Gerry Naylis remain as member-at large on the Board of Director with their first two-year term ending in 2007.

Chapter Member Rich Reitberger will become Immediate Past President, a member of the Board of Directors and Chair of the Nominating Committee.

The Nominating Committee and the Board of Directors welcomes volunteers to serve in leadership capacities within the organization including Committee activities and the Board itself. No other members made their interests and willingness to serve know to the Nominating Committee prior to this report.

Any member with a desire to run as a candidate for Chapter Officer or Director is encouraged to do so. They must contact the Chapter Secretary, Ed Armm (212-695-6670) at least four weeks prior to the Annual Business Meeting. In accordance with the New Jersey Chapter By-Laws, candidates must submit the signatures of five voting members of the New Jersey Chapter SFPE along with their letter of intention to run for any of the above positions. According to the calendar, the deadline is Monday May 15, 2006.

FPE Review Course - Deadline Approaches

The NJ Chapter has sponsored a review course in the past for chapter members who wish to better prepare for the Fire Protection National test to obtain a Professional Engineering License. Anyone interested should contact John Cholin prior to June 1st at jmcholin@bellatlantic.net if you wish to participate in the course. We have a minimum number of registered participants that are required in order for the Chapter to start the course as this takes a great deal of voluntary time and effort on the part of the Chapters instructors. If you would like

AFAA Seminar

The AFAA of NJ will be holding two training classes this year, one in the spring and the other in the fall. They will both be held at the Holiday Inn in Carteret just off the NJ Turnpike.

May 12 and 13 AFAA NJ will present the Intermediate Fire Alarm Seminar one week prior to the NICET Exams at NJIT in Newark October 13 and 14 AFAA NJ will present the Advanced Fire Alarm Seminar two weeks prior to the NICET Exams at NJIT in Newark.
Fire Protection Engineer
Entergy Corp., Vermont

We are seeking qualified candidates with a Bachelor of Science degree in Fire Protection Engineering, or equivalent plus 3 to 5 years of applied fire protection program experience in a nuclear power plant environment.

Anyone interested please call Lee White at 504-576-6747 or email resume at LWhite6@entergy.com.

Fire Protection Sales Associate

A leading fire protection company located in northern New Jersey serving the New York Metropolitan area is seeking a person with a minimum of 2-3 years fire protection sales experience to join their expanding sales team. Position would involve visiting customers to determine their fire protection needs, preparing proposals and developing marketing strategies.

Excellent salary and benefits. Please send resume by email (sstraten@associatedfire.com) or fax 973-684-4511.

Fire Protection Engineer/ System Designer

A leading fire protection company located in northern New Jersey serving the New York Metropolitan area is seeking an experienced person to join its engineering department. Qualifications include experience in engineering/designed sprinkler/suppression or alarm systems. Challenging opportunity to work on jobs from initial site visits through design and installation. Excellent salary and benefits. Please send resume by email (sstraten@associatedfire.com) or fax 973-684-4511.

SLICER & ASSOCIATES, L.L.C.
Fire Protection and Loss Prevention Consulting

J. Sargent “Sarge” Slicer

22 Laurel Street  Office  973-993-5947
Morris Plains, NJ  07950  Mobile  973-493-0369
YM & Fax  865-395-6172
Member – SFPE & NFPA  sargeslicer1@mwbocs.com
Meeting Dates/Program 2005-2006

(Programs Subject to Change)
Watch web page concerning cancellation in case of possible inclement weather conditions

May 1  Tyco Trailer Demonstration
June 12 Annual Meeting/Losses - Mike Newman, Johnson & Johnson, John Cholin, JM Cholin Associates
June 26 Joint NY & NJ Golf Scholarship Outing - West Point, NY

POSITIONS TAKEN BY SPEAKERS ARE NOT NECESSARILY THE POSITION OF THE NJ S.F.P.E.

If anyone would like to contact the NJ chapter by mail, they may do so by sending the correspondence to SFPE – NJ Chapter
PO Box 8268
Parsippany, NJ 07054

All meetings are held at the Hanover Manor, Eagle Rock Road, Hanover, NJ (approximately 1 ½ miles west of Eisenhower Parkway). Get Acquainted Hour 5:00-6:00 p.m. Adjournment is usually before 8:30 p.m. The Executive Committee meets at 4:00 p.m.

Editors Note – If you would like to advertise your company and help offset the cost of this publication, as well as having your business card in front of over 150 Fire Protection Professionals please call John Cholin at (201) 337-8621 for further information. The cost is $100 for fiscal year.
FOR THE BENEFIT OF THE SCHOLARSHIP FUND

Outing Highlights Include:

- Limited Openings to the First 144 player reservations - no exceptions
- 7-8 a.m. Continental Breakfast & Registration - 8:30 a.m. Shotgun Start
- Greens Fees & Cart Included - Four Person Scramble Format
- BBQ Buffet following play - performance and door prizes
- Prize Sponsors and Donations are Welcomed

$110 Per Person
$125 if Payment is Received After June 12th

Make Checks Payable To: “NJ Chapter SFPE”

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Amount enclosed: $__________ Group Contact: _______________________
Contact Phone ______________

Return this portion with your payment to:   NJ Chapter SFPE Golf Outing
c/o Vicki Serafin
P. O. Box 8268
Parsippany, NJ  07054
Tournament Sponsors

To be a part of a worthwhile program of providing scholarships to deserving fire protection students.

**Green / Tee SPONSOR**

$200.00
Identifying sign on hole

Name to appear on sign:_____________________________________________________

**GIFT PRIZE**

Please accept___________________________________________________________
for use as a prize on the day of the tournament. I will bring the prize with me to the outing.

**Refreshment Sponsors:**

If you would like to sponsor the refreshments at the course, please call Vicki Serafin at 973-541-6771.

Amount enclosed: $__________ Group Contact:______________________________
Contact Phone ____________________________

Return this portion with your payment to: NJ Chapter SFPE Golf Outing
c/o Vicki Serafin
P. O. Box 8268
Parsippany, NJ 07054
Location:

West Point Golf Course
Building 1230
West Point, NY 10966
845-938-2435

Directions:

Palisades Parkway North to the Bear Mountain Bridge Traffic Circle.
Go Three quarters of the way around the circle and take 9W toward West Point.

Go 5.5 miles and take the Rte. 218/Rte. 293/ Rte. 6 exit
(Note: You will go under a golf cart bridge just before the exit.) You can see the golf
course on the right off of 9W.

Exit right off the ramp into the parking lot.

Hotel Accomodations  (If Needed)

Rooms available at the:

Hotel Thayer  - www.thethayerhotel.com
Phone: (845) 446-4731

Holiday Inn Express, which is 2 miles away on 9W
Phone: (845) 446-4277
MEETING NOTICE

Date: May 1, 2006

Place: Hanover Manor
16 Eagle Rock Avenue
East Hanover, NJ

Price: In Advance - $22 At door - $25

Dinner: 5:00-6:00 (Cash bar for mixed drinks)
Dinner at 6 PM

Speaker(s): Various Tyco Technical Personnel

Topic: Tyco Trailer Demonstration

Please note for this meeting:
All officers, directors and committee chairman are requested to attend a meeting at 4:00 p.m. at the Hanover Manor.

PLEASE COMPLETE AND RETURN WITH YOUR CHECK PAYABLE TO “SFPE NJ CHAPTER” TO:

Vicki Serafin
Affiliated FM
400 Interpace Parkway, Bldg C - 3rd Floor
Parsippany, NJ 07054-1196
Phone: (973) 541-6771
Fax: (973) 541-6909

NAME: ____________________________________________________________

COMPANY:___________________________TELEPHONE:______________________

ALL RESERVATIONS SHOULD BE RECEIVED BY FRIDAY, APRIL 28, 2006. TELEPHONE RESERVATIONS OR CANCELLATIONS SHOULD BE RECEIVED BY NOON OF THE MEETING DAY.
2005-2006 Chapter Committees

STANDING COMMITTEES

Program
Dave Gluckman, Chairman
Consulting - Nick Chergotis & Peter Rullo

Arrangements
Vicki Serafin, Chairwoman

Membership
Glenn Deitz, Chairman

Nominating
Sarge Slicer, Chairman
Glenn Deitz
Bob Murray

Scholarship Fund
Chuck Gandy, Chairman
Robert Hall
Mike Machetta
Dave Gluckman

Auditing
Joe Janiga, Chairman
Glenn Deitz

Archivist
Nicole Davidowitch

Historian
Jim Tolos

Communications
Vicki Serafin

Fusible Link
Brad Hart, Editor
Dave Gluckman, Asst. Editor
Ana Crisostomo, Publishing
Vicki Serafin, Distribution

SPECIAL COMMITTEES

Bylaws
Jim Tolos, Chairman
Joe Janiga - Co-Chairman

Career Recruitment
Al Dopart, Chairman
Glenn Deitz
Dave Gluckman

Golf Outing
Richard Reitberger, Chairman

Awards
Rich Reitberger, Chairman
Past Chapter Presidents

NY Chapter Liaison
Tom Kuhla (Pat Egan back-up liaison)

PE Examination
John Cholin, Chairman
Joe Janiga
Mike Newman
Chuck Gandy

Joint Seminar/Chapter Seminar
Richard Reitberger, Chairman
Vinnie Fichera
Dave Gluckman

Legislative
Rich Reitberger, Chairman
Vinnie Fichera
Jerry Naylis

P.E. Test Questions
Chuck Gandy, Chairman

Finance
Rich Reitberger - Chairman
John Cholin
Bob Murray