2006, Issue 1

The Catalyst

The Official Newsletter of JOIFF

March 2006

www.joiff.com

From the Editors

This is the first edition of The Catalyst for 2006, the sixth year of its publication. During the past five years, the range of subjects covered in The Catalyst has been wide and varied and to assist our Readers in their search for subject mater, we have now included an Index of the main articles published in past editions, on The Catalyst web page on the JOIFF website.

For this edition, as always, we extend a special thank to those JOIFF Sponsors who have contributed articles for this edition. DuPont provides us with an article on some very interesting research into performance of Firefighters clothing. The biggest Fire in the United Kingdom in recent history was the Buncefield incident and we are pleased to include three stories on this event in this edition. The first is from Angus who provide details of their response and support to the extinguishment of the Fires and in our Members Section we are particularly pleased to report on the huge contribution made by JOIFF Members in ensuring a speedy and safe resolution to the Incident.

JOIFF recently welcomed FPEC Corporation, its first new Member from Japan, and we are very pleased to publish an article by FPEC's President Yoshiyuki Kato on the most interesting technology they have developed to simulate extinguishment of tank fires.

With the growing threat of "Bird Flu" we publish an article by James Ricci which addresses some of the issues with regard to this and other potentially fatal diseases and the "Blue Light" Driver Training specialists Minding Driving have sent us a Press Release which we also publish.

We are pleased to provide a platform to other Organisations engaged in similar fields of activity and in this edition, we publish reports from AFOA, the Airport Fire Officers Organisation, on their recent Conference in Dublin and from the General Secretary of the Institute of Fire Safety Managers.

We would like to thank our advertisers and ours sponsors for their support - without them, we would be unable to function. We encourage our Readers to circulate The Catalyst amongst their colleagues and interested Parties and we welcome any comments.

Our policy is to bring you high quality articles on new developments and other happenings in the area of Emergency Services Management. In addition to The Catalyst, current information relevant to Emergency Services Management is posted on the JOIFF website.

About JOIFF

JOIFF, the Organisation for Emergency Services Management, is a grouping of Organisations represented by their Hazard Manager - or equivalent position - and one nominated Deputy. Full Members of JOIFF are Industrial/Commercial Organisations that have nominated personnel as a Hazard Management Team / Occupational Firefighters/Emergency Responders and Corporate Members are Organisations which do not comply with the requirements of Full Membership but which nonetheless wish to associate with and support JOIFF. JOIFF provides a forum for discussion amongst peers, accreditation of job competencies, information and technical advice. JOIFF welcomes interest from Organisations and persons who wish to become Members - contact the JOIFF Secretariat, details on the back page of The Catalyst.

JOIFF Ltd. Registration number 362542.

New Members

During December 2005 and January and February 2006 the Executive of JOIFF were delighted to welcome the following new Members. This brings the current number of JOIFF Members to 70 Full Members and 23 Corporate Members spread through 24 Countries.

Full Members

Gazobezopasnost Astrakhan Well Control Unit, Russia, represented by Tchoudnovsky Dmitry Markovich, Training Centre Manager and Vitaly Baranov, also in the Training Centre. Gazobezopasnost is Russia's largest well control and blowout elimination service provider with Branches operating in all Russia's major oil and gas regions. All these Branches together employ 300 emergency response personnel whose primary job is to prevent and/or eliminate gas emissions, kicks and open blowouts at oil and gas installations. Gazobezopasnost's Well Control Training Centre is located near the Caspian Sea in the city of Astrakhan and it provides a "hands on" type of training school with a pressurised well reservoir for simulation of kicks and blowouts, electronic simulator and a number of trainers for well control, H2S safety, industrial safety, drilling operations and floormen courses. Gazobezopasnost is the leading training organisation for on-shore and off-shore personnel and Astrakhan Drilling Training is an IWCF accredited location for Rotary Drilling certification since 2001.

Qatar International Safety Centre, Qatar, represented by Graham Rennie, Fire Training Supervisor and Maxwell Davidson, Senior Fire Instructor. Qatar International Safety Centre is currently undergoing approval for OPITO accreditation for Firefighting, is the leading training Centre in Qatar and will also provide manpower for consultancy for Fire and Marine.

Corporate Members

Corporation FPEC, Japan, represented by Ken Andoh, Marketing Manager and Yoshiyuki Kato, President. FPEC specialises in plant fire protection system engineering and provides its customers with well-balanced fire protection system construction. FPEC is also involved in software development for fire protection. An article by Yoshiyuki Kato is published in this edition of The Catalyst.

Kidde Fire Trainers, England, represented by Peter Gould, Sales Manager and Jonathan Smith, Proposals / Project Engineer. Kidde Fire Trainers, whose Head Office is in Germany are a UTC Company that supplies and install Real Fire Training Systems including Industrial, Aviation and Domestic systems.

Kuiken Hytrans, The Netherlands, represented by Richard Verhoef, Sales Manager and Robert Hut, Managing Director. Kuiken Hytrans are suppliers of large capacity water supply systems, high volume pumps and special vehicles for Firefighting.

We look forward to the involvement of our new and existing Members in the continuing development of JOIFF.

Bird Flu

by James Ricci

The current media fixation on bird flu has created a potentially deadly combination of facts, myths and confusion. During a three year period through February 2006, bird flu has infected about 200 people globally, killing almost 90. In comparison, the 2002-3 Severe Acute Respiratory Syndrome (SARS) outbreak killed 774, out of 8096 infections, while the 1918 Spanish flu pandemic infected over 1 billion people and killed between 25 - 40 million. Bird flu is not pandemic flu, yet. While there have been no reported cases of human to human transmission of bird flu - which is how a pandemic would spread most quickly - the World Health Organization (WHO), among other global health institutions, have definitively stated that a pandemic on the scale of 1918 is not a question of "if," but "when." Bird flu is believed to be the precursor to pandemic flu. In the confusion between what bird flu is and what pandemic flu could do is where the danger awaits.

Bird flu, also known as avian influenza, is a viral infection that usually infects birds, and sometimes pigs. Symptoms range from loss of feathers to multiple organ failure to death within 48 hours - for more information, visit the WHO website at www.who.int. As mentioned previously, bird to human transmission is currently rare, but is extremely deadly when it does occur. The current mortality rate for infected humans is 50%. The real concern with this strain of bird flu - medically known as H151 - is that if given enough opportunities it will mutate such as to transmit directly between humans. Seasonal flu - which kills approximately 12,000 people per year in England and Wales - is

different from pandemic flu, as the former usually adversely hits infants and the elderly because of their weaker immune systems. Pandemic flu - which has many of the same symptoms as seasonal flu, just more intense - affects all age groups, and as the 1918 outbreak demonstrated, even people in their 20s and 30s are at risk. Confusion about the varieties of flu also plays a critical roll in how individuals and corporations prepare against these threats.

This confusion, though, extends beyond bird flu. Bird flu and influenza are the tip of the iceberg in regards to deadly naturally occurring infectious diseases. While diseases like Ebola, Malaria and Marburg most likely will not turn into a pandemic, they present serious health and safety problems - and this is particularly true for the fire, oil and emergency response industries. The capacity for these diseases to kill or severely infect individuals is well documented. Ebola, for example, spreads very quickly and can cause massive bleeding and death within days. Despite nearly three decades of research and some recent positive progress, there is no known cure for Ebola. Even diseases like Malaria, for which inoculation is available, have developed resistance against these very same drugs in some parts of the world. The marvels of modern medicine and pharmaceuticals have not prevented the deaths of millions of people annually from infectious diseases. This includes people from Western Europe and North America, home of some of the best medical systems in the world.

Members of the fire, oil and emergency response industries are at a higher risk of exposure and possible infection from the aforementioned diseases. For example, the Congo, Indonesia, and Nigeria are all oil rich nations that have collectively experienced outbreaks of bird flu, Ebola, Malaria, and Marburg in the past 10 years. While an oil worker from Western Europe may have access to first-rate medical treatment in his home city of London or Paris, this will not prevent him suffering an agonizing death from haemorrhagic fever - a disease whose symptoms are similar to flu and can also cause uncontrollable bleeding - in Western Africa. From Iran to Venezuela, Iraq to the Sudan naturally incurring infectious diseases, of all varieties, wreak deadly havoc. Adding to these specific geographical dangers, are issues of frequent travel, stressful work environments, and interaction with a wide range of people. All of these factors expose fire, oil and emergency response workers to a greater probability of being exposed to a disease. With the spread of globalization and the resulting frequency of contact with people from all regions of the world, this rate of possible exposure will increase.

The aforementioned diseases also have several problems that relate to prevention, protection and treatment. One of the biggest misconceptions is these diseases are simply treated with easily purchased medicines. As stated before, Marburg and Ebola have no known vaccine, and drug-resistant strains of Malaria exist. And recent data suggests that most of the anti-flu drugs - namely Tamiflu - will be ineffective in the event of a pandemic. Despite the advancements in modern medicine, medical treatment for many of these infectious diseases consists largely of waiting to see if the diseases pass on by themselves. Additionally, most of these diseases are easily communicable. A simple mosquito bite can give you Malaria; one can be infected with Ebola simply by standing 3 meters from someone who has the disease. They also spread quickly over long distance. The first reported case of bird flu in Africa came from Nigeria - over 10,000km from the next closest case. Finally, the incubation period can range up to 3 weeks. This means that a worker could be in close proximity to a disease carrier, but the infected person would show no visible signs of infection. These diseases can spread quickly and quietly over long distances and in some cases, there are limited medical options if exposed.

The misconceptions about bird flu have also damaged awareness of these other naturally occurring diseases. This is not meant to downplay the potential harm bird flu could cause; rather, bird flu must not be separated from the other deadly infectious diseases. Regardless of media attention, a worker in the Congo or Nigeria, for instance, may in fact have a greater chance of catching and dyeing from Ebola as compared to bird flu. To provide members of the fire, oil and emergency response industries with appropriate protection, these industries must keep current on the public health and related debates on ALL infectious diseases. As oil explorers, and the accompanying fire and emergency workers, move deeper into uncharted territories to find profitable natural resources, the likelihood of exposure to deadly disease increases. Together, these industries must move beyond the superficialities of bird flu, and focus on the realities of all infectious diseases.

(Editor's note: James Ricci is a PhD student researching National Security in the Department of Politics and International Relations, University of Canterbury, Kent, England.)

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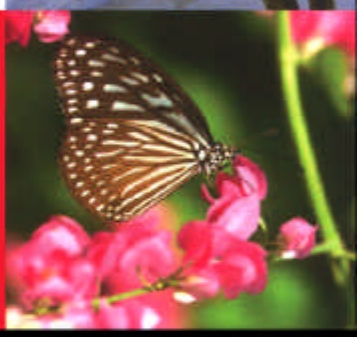

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A Kidde Company

Simulation Program for Extinguishing Fires in Refineries etc.,

By Yoshiyuki Kato, President of FPEC Japan

In October 2003, the roof of the floating roof tanks were sunk by the sloshing caused from a long wave earthquake and a full surface fire occurred in the floating tanks of Idemitsu Oil Refinery in Hokkaido, Japan. A lot of fire extinguishing equipment was gathered, but the fire could not be extinguished.

From that time, various groups have had discussions to find an appropriate countermeasure. As a result of such discussions, Japan's regulation "Disaster prevention law of petrochemical complex" was modified and issued on 1st December 2005. The following is an outline of the modifications.

1. Those companies having a floating tank are required to provide a large capacity foam monitor system in total as follows:

Biggest Tanks size: 34 – 44m	10,000 lpm
Biggest Tanks size: 45 – 59m	20,000 lpm
Biggest Tanks size: 60– 74m	40,000 lpm
Biggest Tanks size: 75 – 89m	50,000 lpm
Biggest Tanks size: 90 – 99m	60,000 lpm
Biggest Tanks size: 100m +	80,000 lpm

2. However, the minimum capacity of each monitor shall be 10,000 lpm for those tanks smaller than 60m in diameter and 20,000 lpm for those larger than 60m. Water-supply facilities and foam concentrate which allow large capacity foam monitors to discharge continuously for 120 minutes must be provided.

3. Conventional mutual aid fire protection organizations can be united to provide a wider mutual aid fire protection organization only for fire fighting activities using this large capacity foam monitor system. It is unnecessary for each refinery to provide its own system/staff, if the system/staff provided correspond to the maximum capacity required for the mutual aid fire protection organization.

4. Staff assignment for self-defence disaster prevention organization must be as follows:

- A person who generalizes fire fighting activities: 1 (one)
- A person who observes large capacity foam monitor: 1 (one)
- A person who observes pump: 1 (one)
- A person who observes foam pump/proportioner: 1 (one)
- A person who observes hoses: 1 (one) for every 200m

However, the number of staff can be reduced if mayor approves.

5. Enforcement: December 1st, 2005
Interim measures: November 30th, 2009

FPEC has succeeded in developing a Simulation Program for Extinguishing Pool Fires in Tanks. The actual experiment for an FRT fire is very difficult to carry out due to environmental influence, and it is absolutely required to estimate the effect from various factors to be considered in fire fighting tactics by using the large capacity foam monitor system, such as wind speed, wind direction, heat radiation from a fire, up draft wind etc. Therefore development of the simulation program was desired even from the aspect of extinguishing strategy and training. FPEC, specialising in fire protection systems engineering, has developed the world's first over-the-top fire extinguishing simulation program for a tank fire in cooperation with Professor Hideo Otani of Yokohama National University who specialises in safety engineering.

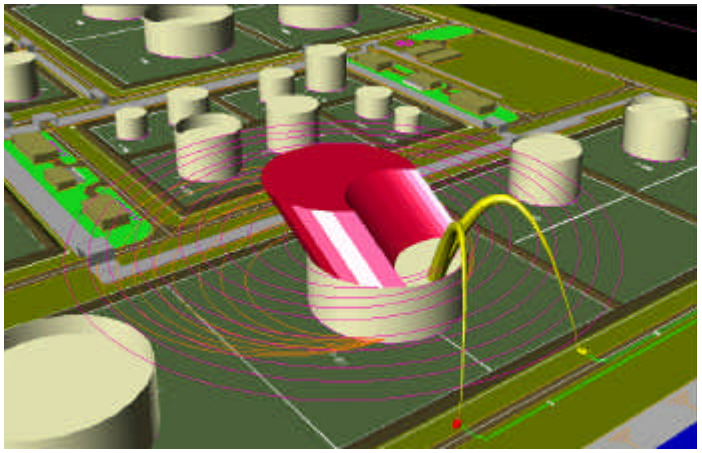
By "Fire Marshal" for tank, which is the name of this simulation program:

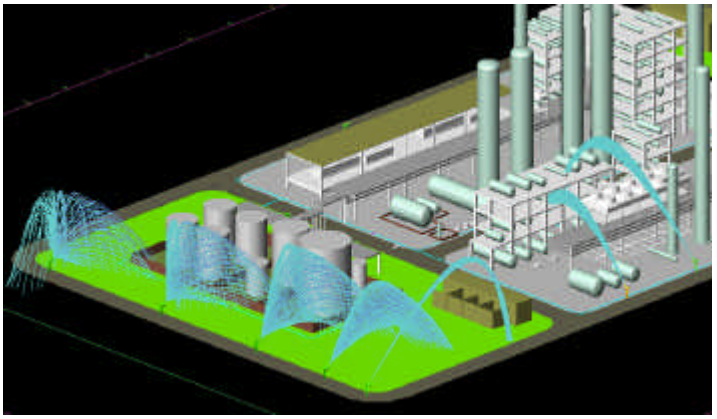
- You can freely set wind speed and horizontal/vertical wind direction, and simulate foam trajectory from a foam monitor under the influence of wind.
- You can input the expansion ratio and calculate the trajectory in accordance with the expansion ratio using aspirator foam nozzle type. For non-aspirator foam nozzle, this program based on the nozzle data will calculate foam expansion ratio and foam trajectory.
- You can calculate the heat radiation map from a fire in accordance with physical properties of oil and wind conditions.
- You can calculate the up-draft wind speed on the tank caused by a fire and simulate whether the foam discharged from a foam monitor has been thrown into a tank effectively. Foam can only be poured into the periphery of the tank, since the up- draft wind speed at the centre of the tank is very fast and is almost 60 m/sec, at which speed foam is blown away.
- You can calculate the time for making a foam bridgehead and foam spreading, and display the process of size and heat radiation of the fire as extinguishing in the 3 dimension graphics.
- You can arrange the fire hoses on the 3 dimension graphics and confirm the space for laying

the hoses.

- This program works with AutoCAD, so you can easily install the plot plan of the refineries, normally drawn by AutoCAD. By adding elevation data, 3D graphics layout of the refinery can be easily made by this program.
- This program has several parameters to adjust the foam trajectory curve with actual data of any manufacturers model of the foam nozzle.
- Any calculation results are displayed on the 3D graphics.

This program contains 3D graphics making, hose laying, and water discharge trajectory calculation modules as a standard model. Unlimited water monitors can be arranged, water throw at any spray angle (full cone) can be calculated under any wind condition, water nozzle characteristics of any manufacturers model can be incorporated into the program by adjusting several parameters. You can confirm visually whether water discharge from water monitors is adequately applied on to the equipment to be protected. This is very useful to allocate the water monitors around the process units for protection of the congested area.





A large capacity foam monitor trailer is very heavy, so it is very difficult to move it to a new location even when the relocation becomes required due to change in wind conditions. And the trailer should be located in a lower heat radiation area under any expected wind conditions. This program is very useful to find an appropriate location where the trailer should be located.

Foam bridgehead is a key if the fire can be extinguished. When the foam is landing on the burning oil surface (normally higher than 100°C), its water will be vaporised rapidly and then partial pressure of oil will decrease. It makes oil to vaporise and increase the force of the fire and almost 100% of foam will be destroyed. Before commencing foam spreading, there are 20~30 minutes time delay, which is for making the foam bridgehead. This time delay is calculated in this simulation program.

The foam bridgehead will be made after this time delay and foam loss of vaporisation and contamination will decrease enabling 100% of foam landed on oil to spread throughout the tank. In other words, the extinguishment will fail unless a large amount of foam, which is large enough to make a foam bridgehead, is applied.

FPEC has also developed a fire extinguishing simulation program for process plants, which is named as " Fire Marshal for Process Plant".

In the near future the following simulation modules will be developed and can be added to "Fire Marshal" to provide further capabilities.

- Smoke spreading under wind condition
- Gas diffusion under wind condition
- Heat radiation in process area fire under wind condition
- Temperature rise in the adjacent tank by heat radiation
- Cooling by water

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For further information see the FPEC website at http://www.fpec1.co.jp/english/
Corporation FPEC, Yokohama Japan
tel: 81-45-222-8870 fax: 81-45-222-8869

(Editor's Note: Yoshiyuki Kato worked for CHIYODA Corporation, one of the major plant construction Companies in Japan, for almost 30 years and was a leader of the Fire Protection Systems Group as a principal engineer.)

"Fire At Buncefield England December 2005"

Early in the morning of Sunday 11th December 2005, a number of explosions occurred at the Buncefield Oil Storage Depot, Hemel Hempstead, Hertfordshire. There followed a large fire, which engulfed most of the site. Over 40 people were injured and fortunately there were no fatalities. Significant damage occurred to both commercial and residential properties in the vicinity and a large area around the site was evacuated on emergency service advice. The fire burned for several days, destroying most of the site and emitting large clouds of black smoke into the atmosphere.
These are some of the sights witnessed by the JOIFF Members who helped extinguish the blazes.











MEMBERS' SECTION

JOIFF is very proud of the JOIFF Members who attended and provided technical support and who were in the front line of extinguishing the huge fire at the Buncefield, England Oil Depot in December 2005. This type of incident is what JOIFF Members work hard to ensure will never happen, but for which they constantly train and remain prepared to tackle. Within hours of being called to assist the Municipal Brigade, a large amount of equipment and a number of the most experienced Firefighters in the United Kingdom were in attendance and they are primarily responsible for the complete extinguishment of all the blazes within a few days. Kevin Westwood, Secretary of JOIFF and one of the Leaders of the JOIFF Team of Responders, said "The professionalism of all those involved was evidenced by the successful mitigation of one of the largest peace time incidents to have occurred on these shores. I am proud to have worked alongside these very remarkable people...."

Those JOIFF Members who were involved are:
From **BP Oil UK Ltd.** Coryton Refinery, Essex: Arnie Arnold, Chief Fire Officer and Neville Wright, Shift Lead Fire officer.
From **SembCorp Asset Protection & Logistics**, Teesside: Kevin Westwood, Principal Fire Consultant & Fire Engineer, Paul Frankland, Operations Manager, Greg Richardson, Fire Engineer, Station Commanders Peter Holmes and Keith Rose, Ewen Duncan, Crew Commander, John Phillips, Site Protection Officer and Mick Musset, Engineer / Fitter / Driver.
From **Total Lindsey Oil Refinery Ltd.** Humberside: Carl Lamb, Refinery Fire and Safety Leader, Mark Smith, Assistant Refinery Fire and Safety Leader and Shift Officers in alphabetical order, Steve Bowles, Lee Christie, Roger Coo, John Davey, Stuart Dean, Mark Fields, Tony Harris, Mick Helland, Rois Lorenz and Glynn Pritchard.
From **Williams Fire & Hazard Control**: Kelvin Hardingham, Fire Consultant & Technical Expert.
Support was also provided by long time JOIFF supporter Dr. Niall Ramsden, Director of Resource Protection International (RPI), who determined calculations and estimates for the foam concentrate and water requirements as well providing advice on foam supplies and logistics.
The equipment supplied by JOIFF Member Organisations for the use of the Fire Teams included
From **BP Oil UK Ltd.**: Williams 6 - Gun Monitor and 10,000 litres AR AFFF.
From **SembCorp Asset Protection & Logistics**: Williams Patriot II Monitor & ancillary equipment, Volvo Triple Agent fire truck with Patriot I roof mounted monitor, 1500kg Dry Powder Unit, 250kg Dry Powder Unit, Low Loader, 4 x 4 and MEX Bund Pourers
From **Shell UK Ltd.** Stanlow, Cheshire: Equipment & Media, 10,000 litres Foam
From **Total Lindsey Oil Refinery Ltd.:** EV2 Foam Tender with 11000 litres AFFF; F1 Foam Pod with 11000 litres FP70, 6 Gun Monitor & ancillary equipment, Full Communication system, Gas detection monitors, Landrover 4 wheel drive vehicle, Equipment Pod with 70 lengths of 70mm flame fighter delivery hose, 6 Long duration BA, 4 MEX pourers, 1000 gpm Oscillating monitor, 6 Gun and ancillary equipment.
JOIFF Corporate Members were also heavily involved in providing fire fighting media to the incident scene. Well done all concerned.

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Members' Meeting

The large number of Members who attended the JOIFF Members Meeting at the Building Research Establishment in Watford on 7th March 2006 were treated to some excellent and stimulating papers. The Institute of Fire Safety Managers was represented at the meeting by Dr. Bob Docherty and the Chief Fire Officers Association by Mark Samuels of Essex Fire Brigade. A written report of the meeting is available from the Secretariat which is currently preparing to put copies of all the Presentations in the Members' Area of the website for download - Members will be advised by email when this has been done. A large THANK YOU is extended to BRE for providing the facilities and to DuPont Personal Protection for sponsoring the refreshments and lunch.

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"Standards and Decontamination"

JOIFF Member Trelleborg Protective Products (UK) invites all JOIFF Members and others with an interest in Hazardous Materials Response to a one day Seminar entitled "Standards and Decontamination" which will be held with the kind permission of JOIFF Member Pfizer UK Ltd. Sandwich, Kent, at Pfizer's premises on Wednesday 10th May 2006. During the day, subjects such as Breakthrough Time, Purity of Breathing Air and Decontamination will be covered. For more information and to book a place at the event, please contact Trelleborg Protective Products (UK), Unit 30 Bergen Way, Sutton Fields Industrial Estate, Hull HU7 0YQ Tel. + 44 (0) 1482 39119. This Seminar is intended to be one of a series that will cover locations in the United Kingdom and Ireland, so if you cannot get to the one on 10th May, contact Graham Haddington in Trelleborg and tell him of your interest.

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Fire Department Instructors' Conference

FDIC will be launched in Bahrain in May 2006. The event, organised by PennWell under the patronage of

H.E. Shaikh Rashid bin Abdullah Al Khalifa, Minister of the Interior of the Kingdom of Bahrain, contains three elements: Hands on Training (HOT) modules (May 6 & 7), an exhibition and a conference (both on May 8-10). The target groups are the Civil Defence Forces of the Middle East and the significant private fire forces serving the petrochemical, industrial and marine sectors. The annual meeting of Civil Defence Fire Chiefs within the GCC will take place to coincide with the event, and organisations from the petroleum sector are fully involved.

PRESS RELEASE
SAVING LIVES FOR BLUE LIGHT RESPONSE DRIVERS

George Smith, Managing Director of Minding Driving, the newly Edexcel accredited company which trains instructors and drivers to work under blue light conditions says “Driver training in the emergency services needs a big re-think. We are uncomfortable with what amounts to a postcode lottery when it comes to training specifically in actual blue light response conditions. We are launching a range of schemes in partnership with local authorities, airport emergency services and the petrochemical industries for a more standardised approach. We see this as a step forward to achieve a higher standard overall."

Minding Driving is a driver development company based in North Wales, which operates nationally and internationally. Now in its fourth successful year, the company was established by George Smith, an experienced former police officer who served in the force for 23 years. He has a passionate belief in promoting safer driving through deeper understanding via driver analysis and profile-linked training.

It is what's going on behind the wheel, which is regarded as the root of the problem. Using technical and behavioural techniques in tandem has proved the most effective way to educate and develop drivers. The punishing three-week course essentially weeds out those who could be technically competent but for one reason or another are a possible menace to public safety under blue light conditions.

George said: "In the third week we can tell if the attitude is wrong under blue light conditions on the road. Our trainees must be able to cope with not just their own personality pressures but the possible panic reactions of other drivers and pedestrians going about their day to day business."

He explained how feelings and attitudes were monitored for counterproductive levels of aggression or stress. Judgement is also vital when it comes to the blue light on / off switch too. It is a matter of gauging the grade of the response as to when and where the blue light goes on or whether perhaps a fire engine or ambulance simply by flashing its lights would do the job more efficiently.

The course for trainers lasts for three week and includes Blue Light response, Development and awareness, Advanced driving, EFAD (Emergency Fire Appliance Driver at Airports and Domestic stations), behavioural aspects of driving. The programme also forms part of Educe BTEC level 2 intermediate award in driving airport emergency fire appliances qualification. The qualification was written by Minding Driving and Ron Parry, Group Fire Service Compliance Manager for the fire officers at British Airport Authority Airports.

Minding Driving also offers a driver profile questionnaire designed and analysed by the company psychologist. The detailed and expertly researched analysis can be offered as an extra resource in the recruitment procedure or used after a crash or motoring incident.

Within the industry, this questionnaire is regarded as one of the most accurate. Minding Driving have taken into consideration that some people are computer illiterate and offer the questionnaire as a hard copy, breaking down any barriers to learning. The driver and company representative also receive a copy to be used as a Training Needs Analysis. This course comes with two other important elements crash counselling and driver confidence building.
George Smith is a member of AIRSO (Association of Industrial Road Safety Officers), CIPD (Chartered Institute of Personnel and Development), Advanced Driving Examiner for ROSPA, a member of the IAM and has professional qualifications in Personnel and Development

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Airport Fire Officers Conference

Dublin 25th & 26th January 2006
by Symon Clifford.AFOA Operations Officer

The 2006 Airport Fire Officers Conference was held in Dublin on the 25th and 26th January. The conference was a great success attracting over eighty delegates.

The Great Southern Hotel was the venue with speakers coming from all over the UK, Ireland, America and Africa. Speakers and presentations were of a very high standard and, as a result good debate ensued. The conference was opened by Mr R Hilliard of Dublin Airport with a welcoming address from Peter Van Velzen of the Irish Civil Aviation Authority. A summary of each subject follows:-

Chris Farnaby head of the CAA RFFS Branch gave the key note speech. Chris spoke on the current issues impacting the industry and those expected to confront us in the near future. It was extremely informative and touched on amongst other things New Technology associated with fire appliances and their design, RFFS Standards, Training Issues and the draft edition of CAP168.

Sid Hawkins of the Air Accident Investigation Branch spoke of the need for all agencies to adopt a "Team Risk Based Approach" This should be applied from the time of arrival at an incident through to the full remediation of the crash site. A number of recent air accidents were used to illustrate how well this worked in achieving a successful conclusion.

Chris Formby Chief Fire Officer of Manchester Airport presented on the Pakistan Airways 747 Ground Incident and the resulting problems encountered following a full evacuation. A number of significant challenges arose including command and control of said passengers, coordination of support agencies especially the on site ground handlers, successful extinguishment of the undercarriage fire which precipitated the evacuation, coordination of the airline staff on board and communications between all agencies involved including the pilot.

Bob Relyea of Crash Rescue Equipment, Texas, USA spoke about Snozzle technology and the part it has to play in modern fire fighting techniques involving aircraft incidents. This type of advancement is gaining rapid recognition within the UK; Birmingham Airport has already purchased one such vehicle and, at least six other units have been or are about to be ordered by other airports. The key to this concept is the fact that it works best as part of the fire fighters armour; it cannot and should not be used in isolation as the holistic remedy to all possible scenarios.

Andy Fry, ACFO of Essex County Fire and Rescue delivered a paper on compartmental fire fighting and the associated hazards. Aircraft are no different in this regard to most other structures other than the fact that they are surrounded by fuel and made of materials which burn readily in the right circumstances!

He emphasised the need to deliver safe but realistic training so as our employees can confront such incidents with the right knowledge and understanding. As a result of Andy's attendance it is AFOA's intention to develop better links with CFOA as there is a great deal of information to be shared on each sectors method of operation and identified needs.

Like CFOA, AFOA prides itself on contributing to industry in whatever way it can and as such it does help shape certain decision making processes hence the need to furnish such relationships.

Alec Feldman of JOIFF presented a paper on NVQ's and described how easily station training programmes could be aligned to such standards, to enable a fire fighter to be able to obtain a fully recognised vocational qualification once s/he had achieved the necessary units and elements.

The work Alec and JOIFF are undertaking has also been recognised and accredited to the IFE.

Brain Wiggins of Amdac Carmichael spoke on how fire appliances were evolving especially with the arrival of Snozzle Technology in the UK. It is clear that the once prescriptive requirements for procuring an airfield crash tender is no longer quite so rigid. If an airport can produce an agreed safety case for a specific design which veers away from the norm but is deemed fit for purpose, then it should be an accepted practice. Independent suspension was going to be revisited; whilst research into Compressed Air Foam Systems (CAFS) was on-going.

Peter Gould of KIDDE Fire Trainers updated the audience on the latest generation of fire training rigs. They are becoming far more diverse than ever in an effort to produce competent fire fighters capable of dealing with both aviation and structural/domestic incidents. This was being achieved against a background for delivering safe but realistic fire training which satisfies the CAA, HSE and the Environment Agency.

Charles Hasen Adu is the Group Fire Officer for Ghana and is based in Accra. Although he gave the final presentation of the two days, it was certainly the most enlightening and entertaining session of the whole event. The overriding message was how the Ghanaian RFFS has managed to procure good equipment and deliver quality training to its personnel despite the huge logistical and financial restraints placed upon them.

The innovation shown and the enthusiasm displayed by all is remarkable. The fact that 1400 airport and

supporting agency staff took part in their major exercise was testament to this and, as such it really was a true test of their emergency plan and facilities.
Charles has established a similar organisation to AFOA in his region of Africa and, has used much of the UK's practices and standards to improve aviation safety in that part of the world. Many neighbouring countries are following his lead and raising their respective bars as best as possible. AFOA will be sending two representatives to their next planned conference, the dates of which have yet to be confirmed.

AFOA is a professional body drawing its membership from serving Fire Officers who have a management or supervisory role at airports throughout the UK and Ireland. The association's mission statement embodies its guiding philosophy. *"The Association is a technical body, dedicated to promoting and maintaining the professional image and status of Airport Fire Services within the United Kingdom and Ireland, ensuring continued communications between them, through an ongoing dialogue of information and knowledge on all relevant technical and operational matters."*
During the AFOA Annual general meeting the new committee for 2006 was elected. A number of key projects for the coming year were also agreed. PPE, Emergency Planning, Driver Training, Carbonaceous Fire Behaviour Training and Environmental issues associated with practical training are this years work streams.

Due to the success of this year's conference, next year's event has already been booked for the 24th and 25th January 2007.
The venue will once again be the Great Southern Hotel Dublin Airport but although the event is aviation focused the AFOA membership would welcome the attendance of people from other fire fighting sectors and countries.
Special thanks must go to **Amdac Carmichael** and **KIDDE Fire Trainers** for their sponsorship of the event and to Dublin Airport, in particular Mr Bob Hilliard and Gerry Keogh. They truly did lay on an Irish welcome. The hospitality bestowed on the delegation was exceptional.

For further details on next years event or AFOA you can contact Symon Clifford on 01275 473707 or via e-mail on sclifford@bristolairport.com.

THE INSTITUTE OF FIRE SAFETY MANAGERS

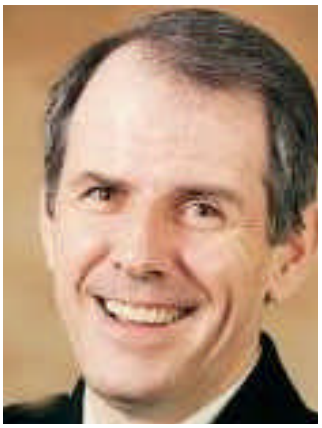
by Dr Bob Docherty Secretary General

I am pleased to report that The Institute of Fire Safety Managers (IFSM) has been accepted and now registered and certified as a fully incorporated and limited company with Companies House as and from 9 January 2006. This is a prestigious occasion as it heralds the Institute as a leading professional body in the worlds of both fire safe and security.

This acceptance by Companies House means that the Council of the Institute can now get on with its business plan of bringing long needed services to both members and non members alike as well as making a mark in the fire safety and security forums at both national and international level.

Another initiative and service to members that the Institute is now providing, in order to encourage

Dr Bob Doherty
General Secretary



David Jones
Membership Secretary

members to operate competently and correctly is in the provision of Professional Indemnity and Public Liability Insurance and an agreement has been reached with Sennet Insurance services for members to get favourable rates and a 7.5% discount on PI and PL insurance. The link is through the IFSM website to Sennet.

Following the latest Council meeting of the IFSM on 18 January 2006, it was agreed that strategic partnerships were needed in order to best serve the fire safety and security/protection of industry, commerce and the public, and that the Institute was best placed to deliver these in conjunction with a number of partnerships. The liaison and partnerships that we have already forged, such as those we have already made with Lancashire Partners Against Crime (LANPAC) and JOIFF, the Organisation for Emergency Services Management means that the good work has already been started.

Indeed, it is nice to report that Dave Jones (former Chief Superintendent, Lancashire Constabulary) has taken over as Membership Secretary from Ken Day who has been the stalwart behind that position for many years. It is appropriate to mention here that the Chairman, John Williamson, and Council thanked Ken for all his work over the years. Ken will remain on Council and continue the good work.

Some of the new services that will be coming on line with the IFSM shortly will be a full accreditation and validation service for training and course providers, a more generic and inclusive membership procedure with a more grades of membership to reflect the up and coming diversity of membership that is now applying to join the Institute, a system of continuous professional development (CPD) that the Institute will offer for both its own activities and those of other organisations who may wish to have their activities accredited with CPD from the Institute.

The Institute has also made its disappointment at the further delay to the RRFSO known to the Government. Our members have found this further delay frustrating and embarrassing as once again the information presented by many of us, especially at seminars and training courses, to employers, customers and clients has now proved to be inaccurate. Some of our members have found that many potential customers have once again postponed the need to carry out fire risk assessments of their business premises until the introduction of the legislation. Their perception is that their existing fire certificates preclude the need to undertake such a risk assessment and that the Fire and Rescue Services are not carrying out relevant inspections of certified premises and consequently they see no point in incurring the associated costs until they are forced to comply. Our members include numerous highly qualified and experienced fire experts working commercially all over the world. Many were former senior specialist fire safety officers with fire & rescue services and in order to ensure that that there in no further delay, and it is actually implemented in Autumn of 2006, we have offered our services in any way that the ODPM may see fit.

Some of you who read the UK 'FIRE' magazine may recall that a few years ago, when the Regulatory Reform (Fire Safety) Order was in its draft stage of development, I wrote a piece for that magazine asking that there should be some kind of recognition, inclusion, or call it what you will, in the legislation stating that those who wish to carry out fire risk assessment should be recognised as competent in some way and that the legislation should reflect this. I know that this idea was also voiced by other individuals and organisations but was dismissed by the Home Office (as it was at the time) with the responsibility for checking the competence of the individual placed squarely on the

responsible person. I also know that both the FBU and CFOA still voice a desire for those who carry out fire risk assessments under the legislation to have some form of accreditation, preferably by a third party.

Look no further! Third Party accreditation is now a well established means of certifying an individual's qualification to operate in many of the diverse areas of fire safety engineering. The IFSM therefore offers accreditation to qualified individuals. This accreditation includes eligibility in the field of Fire Risk Assessor for any fire safety professional that provides sufficient evidence of professional training and experience to be placed on the Institute's Professional Register of Fire Risk Assessors.

The IFSM Council thought that it was about time that there was a bona fide form of third party accreditation available to those who want to carry out fire risk assessments, and that the IFSM was in right position and the proper organisation to offer this service as well as administrate it. The IFSM is therefore proud to announce that it has just launched its Register of Fire Risk Assessors for both members and non members of the Institute. Applications are on the IFSM website and can be downloaded for completion.

There is no formal definition of a Fire Risk Assessor. However, the Institute believes that it can provide a framework definition of this role as someone who is competent and capable to carry out assessments of premises/workplaces, or similar establishments and organisations, to identify, assess and record fire risks, as well as carrying out audits to verify other person's fire risk assessments if that is within their normal sphere of responsibilities. Also, a Fire Risk Assessor will be able to provide sufficient and adequate advice and recommendations in order to minimise and control these risks. A competent Fire Risk Assessor will be able to carry out fire risk assessments for life safety and property protection, usually for the purposes of legislative compliance, but also in the field of asset management as well as business continuity. An application onto the Register is open to those persons who feel that they can satisfy the above criteria and the requirements set out by the Institute and who are working in the field of fire safety and fire engineering. It is the hope of the IFSM Council that fire safety officers, or managers as they are increasingly being called in the Fire and Rescue Services, and individual members of JOIFF and associates will ally themselves closely with the title of the Institute and join as members and apply for the assessors register as part of their personal and professional portfolio.

The application process for any registrant is completely open and inclusive although he or she will have to demonstrate their competence and ability as well as provide proof of both professional indemnity and public liability insurance. The process itself is carried out by two internal assessors appointed to each application and then an external assessor who validates the 'work' of the internal assessors. Only when the external assessor is satisfied is the applicant placed onto the register.

A number of applications have already been received and processed and it looks like a winning initiative already. Application forms are available on the website: www.ifsm.org.uk.

One of the wishes of the Institute is that it is totally transparent and all the business including minutes etc. are posted on the website so anyone can see at a glance what issues are being debated at any one time and what activities are being planned for the future. Anyone interested in general terms, or who wishes to apply for the membership or the Risk Assessors Register need only visit the website where all the relevant information and forms are available.

Finally, the next Technical Meeting of the IFSM will take place at the Jaguar Cars Ltd. Visitor Centre Theatre Castle Bromwich, Birmingham, starting at 10.30 hrs. Anyone wishing to attend should contact May Husseyin at mhusseyin@thefpa.co.uk Tel: 020 77931601 or Bob Docherty or bob@flamerisk.co.uk Tel: 01204 305176.

ANGUS FIRE'S SPEEDY RESPONSE TO BUNCEFIELD BLAZE

Responding quickly following a catastrophic explosion at the Buncefield oil depot, the Angus Fire Emergency Service supplied a large quantity of foam concentrate to help fire crews extinguish fires in twenty hydrocarbon storage tanks.

The Angus Fire Emergency Service was activated immediately on receiving notification from Hertfordshire Fire & Rescue Service at 07.05 on Sunday, December 11. Within a few hours the company despatched emergency foam stocks from its facility at Bentham, North Yorkshire, by road tanker under full police escort.

Over subsequent days the Angus Fire Emergency Service transported additional foam stocks to support firefighters at the scene. All told, the company supplied more than half a million litres of foam, mostly Angus Fire FP70.

Angus Fire's Martin Hough, who was on site at Buncefield, and Gary Godfrey, co-ordinated foam supplies and provided technical assistance. The company's foam scientist Maurice Birkill was also on hand to help with environmental and disposal issues. Throughout Sunday and Monday foam stocks were rushed to the scene not only by Angus Fire, but also by local authority and industrial fire services all over

the country. By midnight on Sunday 250,000 litres of foam concentrate were either on site or en route to the scene. High-volume water capability and a plan for water run-off were in place early Monday morning.

Angus Fire Loading up Foam Stocks at Bentham
Photo courtesy of Angus Fire

Foam Attack

A major foam attack was launched on Monday morning using high-capacity foam monitors including three Angus Fire Titans. It quickly became apparent that Angus Fire FP70 foam was performing extremely well. Despite working under arduous conditions fire crews extinguished fires in ten of the twenty burning tanks by midday.

Angus FP70 is a high performance foam that is specially formulated to extinguish large storage tank fires. Its fluoroprotein-based bubble structure provides exceptional resistance to heat, enabling it to pass through flames, impact on hot fuel and move over the burning liquid surfaces. Its bubble walls are tough enough to seal tightly against the hottest tank shells, and even under a torrent of cooling water its stable foam blanket remains in tact.

On Wednesday morning Hertfordshire F&RS announced that the last of the fires had been successfully extinguished. Fire crews went on to prevent re-ignition and burn back by covering the exposed fuel surfaces with a medium expansion foam blanket using Angus Fire Bund Pourers.

Roy Wilsher, Chief Fire Officer, Hertfordshire F&RS comments "The successful and relatively early resolution of this incident was due to many factors including the support of many fire services, oil industry fire fighters and companies such as Angus. The assistance given by Angus in terms of advice and bulk foam concentrate was invaluable and I am pleased to make my appreciation public".

Angus Fire has also received a letter of thanks from Jim Fitzpatrick, Parliamentary Under Secretary of State in the Office of the Deputy Prime Minister.

Track Record

This latest incident reinforces the track record which Angus Fire has established in delivering urgently needed supplies of foam and technical expertise to major incident sites world wide. Angus Fire is part of UTC Fire & Security, a United Technologies Corp. (NYSE:UTX) business unit, which provides fire safety and security solutions to more than one million customers around the world.

A dedicated emergency hotline (+44 (0) 15242 61166) provides a simple means of communication 24-7. Bulk foam stocks are held in constant readiness at foam production facilities and distribution centres in the UK, France, Italy, USA, South Africa, Dubai, Singapore and Australia.

When a call for help is received an emergency team springs into action. Depending on the scale and location of the incident, delivery by road can often be co-ordinated within an hour and by air freight within a few hours. Foam production staff at all sites are on constant standby to produce additional supplies of foam.

Angus Fire has supplied emergency foam stocks to several major storage tanks fire incidents, the first being at Milford Haven in 1983. More recently in 2003 the company chartered an Antonov 124, the largest heavy transport aircraft in the world, to air lift foam stocks to a multiple storage tank fire at Repsol-YPF in Spain. In the same year a Boeing 747 cargo aircraft was used to supply 100,000 litres of foam to a tank fire at Idemitsu Kosan in Japan.

"The assistance given by Angus in terms of advice and bulk foam concentrate was invaluable and I am pleased to make my appreciation public".
Roy Wilsher, Chief Fire Officer, Hertfordshire Fire & Rescue Service

Fire fighters apply foam at Buncefield fire
Photo courtesy of Captured Images

DuPont Personal Protection

DuPont™ Tychem® C and Tychem® F coveralls

Lightweight Type 3 protection against a wide range of organic and inorganic chemicals and biological hazards.
➔ now available with integrated socks and thumb loops.

Do you need a high quality protective suit for use in the chemical or pharmaceutical industry? Are you seeking reliable protection for hazardous material disposal? Are you exposed to biological hazards?
Tychem® C and Tychem® F from DuPont offer you safe and reliable Type 3 protection for a wide range of various applications.

Barrier to

☑ Chemicals

Tychem® C	Tychem® F
Many concentrated inorganic chemicals	Many organic chemicals and highly concentrated inorganic chemicals
Pressure up to 2 bars	Pressure up to 5 bars

☑ Biological hazards

Tychem® C	Tychem® F
Tychem® C and Tychem® F protective clothing materials meet EN 14126: 2003 requirements in the highest performance class.	

Possible areas of application:

- ☑ Chemical industry
- ☑ Pharmaceutical industry
- ☑ Petroleum and crude oil environments
- ☑ Tank cleaning, inspection and maintenance
- ☑ Agrochemical handling
- ☑ Decommissioning of production plants
- ☑ Decontamination of contaminated land and work sites
- ☑ Disposal of hazardous materials
- ☑ Industrial cleaning and maintenance
- ☑ Military applications
- ☑ Emergency response services, spill clean-up and accident interventions
- ☑ Disease and disaster management
- ☑ Medical applications

The advantages of Tychem® C and Tychem® F

- ☑ Combination of chemical and biological protection in lightweight limited use garment.
- ☑ Excellent protective clothing materials which undergo chemical permeation and mechanical properties testing by independent institutes requested by DuPont and complying with EU Standards.
- ☑ Easy to dispose off since the protective clothing contains no halogen compounds. When contaminated they must be disposed off as for contaminated waste.
- ☑ Reliable and constant quality: each garment is visually checked before leaving production.
- ☑ The garments are designed to provide the right fit and ease of movement for the wearer when completing difficult tasks. Tychem® garments are designed to fit the operator and protect them in most working environments.
- ☑ Comfortable, wearers feel better in them since they are extremely lightweight and very flexible. (only 450g for the Tychem F - size L)
- ☑ Antistatic properties**

DuPont™ Tychem®

Do cost savings on new fire kits compromise the safety of our fire fighters?

News release from Dupont

When sourcing personal protective equipment (PPE) for fire fighters, there are three factors to balance: economics, protection and comfort. In some countries, due to the decline of government subsidies, tried and trusted turn out gear has begun to be replaced by cheaper alternatives. DuPont has invested considerable resources into researching the performance and comfort of turnout gear worn by today's fire fighters, and the results are somewhat astounding. So with plans afoot for the UK fire service to embark on an Integrated Clothing Program, should UK firefighters be worried that their protection will be compromised in a cost-saving exercise?

Most European countries have witnessed a decline in emergency calls to actually fight fires. However, a spate of recent disasters - both natural and terrorist-related - have posed new risks for emergency responders and consequently, the safety of firefighters and in particular, the performance of their PPE is a hot topic. The changing roles of fire fighters and evolution of the fire service demand of fire fighters' PPE more comfortable, ergonomic solutions in addition to sustained levels of heat & flame protection.

In conjunction with independent bodies in the US, Switzerland and Germany, DuPont has commissioned a series of trials on the comfort, protection and overall performance of various fire kits available today, with the ultimate goal of finding appropriate methods to benefit end users.

The results have shown that many modern fire-fighting kits are providing neither adequate protection nor heat stress management and freedom of movement.

Performance in heat and flame

Andreas Fries, from the DuPont Personal Protection team in Geneva, explains, "Ten years ago, turn out gear, when tested on the DuPont™ Thermo-Man® flash fire PPE evaluation system, produced data to indicate that the wearer, if exposed to an eight second duration flash fire when wearing those garments, would suffer possibly up to 25% of total body burns. With advances in technology over the last ten years, one would expect that the safety of fire fighting garments had increased, not decreased. For instance, fire services in most states of Germany are entitled to Government subsidies for the purchase of turnout gear that meets the design and manufacturing requirements of "Herstellungs- und Prüfvorschrift" (HuPf). But when recent HuPf certified garments were put through the Thermo-Man® tests, the resulting data indicated that the wearer would suffer 42% total body burns. When modern high performance turn out gear made of NOMEX® was subjected to the same tests, data indicated that the wearer would suffer 0-2% of body burns."

Editors note: Copies of Thermo-Man® test results on High Performance NOMEX® turnout gear in comparison to currently available turnout gear certified to current HuPf requirements, both kits meeting EN469:1995 Standard are available on request from DuPont.

Heat Stress

Feedback from German Fire Fighters after controlled wear trials of various different kits confirms that some of the cheaper turnout coat systems are causing sweating and discomfort after only a short time. Heat stress is a well-documented threat to the safety of fire fighters. Injury data from the US indicates that about 50% of all injuries are related to fire scenes, with physical stress and over exertion being the main reasons for injuries and fatalities. DuPont aims to bring down heat stress through research into and continual development of flame resistant fibres, fabrics and clothing systems. NOMEX® thermal technology manages the extremes of heat yet still delivers incredible lightness. It wicks moisture away from the skin, is breathable, durable and comfortable to wear.

Innovative testing facilities

In conjunction with the EMPA Swiss Research Institute for Material Sciences and Technology, DuPont has taken a holistic approach, integrating all the factors contributing to the occurrence of heat stress such as sweating, heat flow and the design of protective clothing. SAM, the mobile Sweating Articulated Mannequin, is a test dummy with sensors to measure moisture and temperature. Several factors such as the level of sweating, room temperature, relative humidity, running speed and wind speed can be set as required. The aim of this computer-assisted evaluation program is to discover the microclimates (temperature and humidity) below a garment system.

Another joint research program with EMPA (Project No. 204114) evaluates how moisture is transported through all layers of clothing and how radiated heat affects the moist layers.

With thermo-graphic analysis, DuPont investigates protective clothing concepts under real conditions of use. It involves subjecting a test person (e.g. a fireman) to active physical stress and recording the heat distribution and transport of perspiration on body and clothing by means of a thermo-graphic

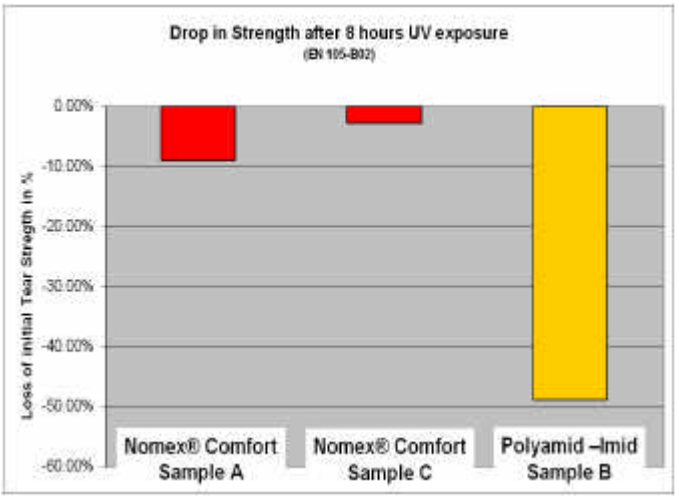
camera. In this way invaluable findings can be made regarding the clothing design, weak points can be localized and the effectiveness of complete protective equipment can be assessed.
Thermo-graphic analysis is particularly suitable for investigating multi-layered systems, aiming to minimize heat and perspiration and, finally, the risk of steam burns.

Wear life and aging criteria

Solar radiation has a known adverse effect on colorfastness and the mechanical resistance of fabrics used in fire fighters' PPE, but new research has shown that it may also have significant influence on protection level and overall wear-life. Natural weathering at the Fraunhofer Institute, ISE, Freiburg in Germany, in August/September 2005 showed a reduction of initial tear strength by more than 85% on some new turn out coats after 14 days exposure, and a reduction of absolute tear strength below the EN469 standard (25 N). After garments made with an outershell from 99% polyamid-imid, 1% antistatic fiber, where exposed to natural weathering and washed and dried five times, break-open went through to the inner liner of the garments.

Effects of natural weathering (21 day at Fraunhofer ISE, project TAG3-MH-0511-E05) and 5 wash and drying cycles on Turnout gear subject to 8 second exposure on Thermo-Man® 1: massive breakopen in the front part, 2: break open through innerliner in the back, 3: break open and complete loss of back part

Major discrepancy in tear-strength retention results obtained after only 8 hours of color-fastness tests (according to EN/ISO 105 B02) between tried and trusted fabrics versus new offerings have triggered specification changes for some police tenders to ensure appropriate wearlife - a move that may also need to be followed for fire fighters' PPE. Lifetime assessments of turnout coats made with NOMEX® outer-shells have demonstrated the sustained protection level of NOMEX® - even on garments over 10 years old that have been through several laundering cycles.



Results of STFI on Tear Strength measurements after 8h UV exposure according to EN/ISO EN ISO105-B02,project 1678/05 , 2005

Andreas concluded, "This new research provides repeatable and reproducible, factual data on the performance of a variety of fire kits and fabrics in use across Europe today. In direct comparison with lesser quality turn out gear, garments made of NOMEX® can work out much more cost effective in the long run due to their increased performance and wear-life. Buyers of turn out gear should be aware that although there are many cheaper alternatives to garments made of NOMEX®, they may not offer the same high level of protection, comfort or wear-life, and this could compromise the safety of their fire fighters."

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For more information on any aspect of this article please visit www.dpp-europe.com.

(DuPont is a science company. Founded in 1802, DuPont puts science to work by creating sustainable solutions essential to a better, safer, healthier life for people everywhere. Operating in more than 70 countries, DuPont offers a wide range of innovative products and services for markets including agriculture, nutrition, electronics, communications, safety and protection, home and construction, transportation and apparel.)

Diary of Events 2006

April	24th - 29th	**FDIC (The Fire Department Instructors' Conference)** Indianapolis, Indiana, USA.
May	3rd - 4th	**Irish Chief Fire Officers Association Conference and Exhibition.** Carrick on Shannon, Ireland.
	6th - 10th	**FDIC (The Fire Department Instructors' Conference)** Bahrain.
	10th	**Trelleborg Seminar "Standards and Decontamination"** Pfizer UK Ltd. Sandwich, Kent, England
July	19th - 21st	**Institution of Fire Engineers Conference and Exhibition** Cardiff City Hall, Wales.
Nov	8th - 9th	**FIRE 2006 Exhibition and Conference** Telford, Shropshire, England.

Please contact the JOIFF Secretariat with details of any event that you think that JOIFF Members might be interested in attending.

Note: The Catalyst is not responsible for the accuracy of dates and / or venues announced. This is based on information given to the Editors and is published in good faith.

JOIFF Training Notes

The following dates have been provided by the UK based JOIFF accredited Training Establishments. If your own specific Training requirements are not listed below, contact Fulcrum Consultants who will be happy to try to facilitate you.

Programme for 2006 - JOIFF accredited Training Establishments:

JOIFF accredited Course	Dates	Venue
5 day Team Leader	12th - 16th June	Serco IFTC Teesside
	18th - 22nd September	Serco IFTC Teesside
3 day Occupational Firefighter	6th - 8th June	Serco IFTC Teesside
	10th - 12th October	Serco IFTC Teesside
	11th - 13th December	Serco IFTC Teesside
2 day Practical Firefighting	19th - 20th June	Serco IFTC Teesside
	16th - 17th October	Serco IFTC Teesside

For further information about JOIFF accredited on-Site Competency Based Training Programmes, the new range of Fire Service NVQs and any other aspect of JOIFF Training, please contact the JOIFF Secretariat contact details below.

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