2002, Issue 4

The Catalyst

The Official Newsletter of JOIFF

December 2002

www.joiff.com

From the Editors

This Edition completes the second year of The Catalyst and we would like to extend our sincere thanks to all those who have submitted articles and letters, who have provided advertising and who have circulated and read The Catalyst, for their wonderful support which has given The Catalyst, the Official Newsletter of JOIFF, such a prominent place in the forefront of the distribution of current information and ideas in the field of Emergency Services Management. The Editors have been resolute in producing The Catalyst as a Newsletter and not as a magazine, because they believe that in the form in which it is produced, it is far more accessible to a much wider audience, in particular to those who normally would not be included in the distribution list when publications are received in an Organisation. We look forward to your continuing support during 2003 and as always, any comments and contributions of relevant technical input will be most welcome.

In this edition, in our New Members Section, we once again are delighted to welcome new Members who have joined JOIFF during the past three months. We have reports of the joint JOIFF / IFE Seminar and the momentous meeting hosted by the Singapore Aviation Academy and addressed by JOIFF Chairman Gary Douthwaite and we also include our regular features, the Reactor Column and Training Notes.

A further step forward in giving all personnel of JOIFF Members the opportunity to obtain qualification, is the IFE Mature Student route, as outlined in an article by John Judd. This is aimed at Management who are experienced in their profession but who currently do not have IFE qualification. It is hoped that those who might qualify for this award will give serious consideration to the proposals.

We publish the final article in the series by 3M Germany which covers the most important issue of washing Firefighters protective clothing. Special thanks to Stephanie Uch, Giovanna Longo and Dorothée Loosen of 3M Germany for their most informative articles in this and in the past two editions of The Catalyst.

We thank our advertisers Dascom, from Kidde Products, who have also submitted an article on Halon destruction, Ten Cate Protect and the GD Group. And we are very pleased to welcome our newest supporter, JOIFF Associate Member MSA (Britain) Ltd., who we also thank for their advert. All copies of The Catalyst can be downloaded from the JOIFF website.

Everyone involved in the preparation, publication and circulation of The Catalyst wish all its contributors, its advertisers and its readers a Healthy, Happy and Peaceful Christmas and New Year.

About JOIFF

JOIFF, the Organisation for Emergency Services Management in High Risk Industry, is a grouping of Companies, represented by their Emergency Services Manager - or equivalent position - and nominated Deputies.

For the purposes of JOIFF Membership, a High Risk Industry is considered to be any Industrial / Commercial Organisation that is engaged in processing, storage, handling and/or transport of high risk materials and that has nominated personnel as Occupational Firefighters /Emergency Responders.

Associate Members of JOIFF are Organisations or Individuals who do not comply with the requirements for Full Membership but who share the same interests.
JOIFF provides a forum for discussion amongst peers, accredited training, information dissemination and technical advice.

JOIFF welcomes interest from suitable Organisations who wish to become Members or Associate Members - contact the JOIFF Secretariat, details on the back page.

JOIFF Ltd. Registration number 362542.

The Catalyst
The Official Newsletter of Joiff

New Members

During the past three months, the Executive of JOIFF were delighted to welcome the following new Members:

Members:

David Deane Associates Ltd. Buckinghamshire England, represented by David Deane, Chief Fire Officer, with Robert Pollard, Operations Coordinator as Deputy. David Deane Associates Ltd. provide Film and Television fire protection services. They have a large number of personnel, vehicles and equipment and also operate a Fire Brigade Training School.

Ineos Chlor Ltd., Cheshire, England, represented by Frank Douthwaite, Emergency Services and Security Operations Manager. The Emergency Services operate a continuous shift system and have a number of vehicles including specialist hose layer, vacuum tank, environmental response vehicle and ambulance.

Petroplus Tank Storage (MH) Ltd., Milford Haven, Wales who operate a large third party Oil Storage Terminal are represented by Robert Griffiths, Safety and Environment Officer with Huw Morgan, Environmental Engineer as Deputy.

Sasol Synfuels (Pty) Ltd., Secunda, South Africa represented by Pine Pienaar, Area Leader: Emergency Management, with Hannes Du Toit, Specialist Emergency Management - Engineering, as Deputy. Sasol Synfuels Emergency Management Services is the largest Industrial Fire Service in Southern Africa. Because of the remote location from any major city, Sasol Synfuels has to be totally self supportive with respect to emergency management. The Department consists of an Operational Section of full time firemen, an Engineering Section and a Training Section. The Department is also recognised as a "Designated Fire Services" under the Fire Services Act of South Africa and have an area of responsibility measuring 250 square kilometres, of which 8.5 square kilometres make up the primary petrochemical complex. You can learn more about Sasol on their websites at http://secabweb.sasol.com/sher/Emergency%20Management/Home/Emergency%20Mng.h which is the Home Page. Sasol Fire Training Academy is at www.sasol.com/firetrainingac/

Members - Associate Corporate:

Croda Firefighting Chemical Ltd., Liverpool, England, represented by Chris Shirley, Foam Product Manager, with Mike Taylor, General Sales Manager as Deputy. Croda are a long established and well know Manufacturer of Fire Fighting Foam and Powder.

MSA (Britain) Ltd., Coatbridge Scotland, represented by John Walker, Sales Manager with Richard Wright, Head of Distribution, UK and Ireland as Deputy. MSA are a Worldwide Corporation who manufacture a full range of Safety Products, including Self Contained Breathing Apparatus, Respiratory Protection, Gas Detection and a full range of PPE. SCBA and other respiratory products are one of the major categories of PPE used by Members of JOIFF and so a particularly warm welcome is extended to MSA as the first Company manufacturing these items to join its ranks.

Saudi Foam Factory, Al Khobar, Kingdom of Saudi Arabia, represented by Vivion Archbold, General Manager. Saudi Foam manufacture Firefighting Foams and supply a full range of Fire Safety equipment.

Members - Associate Individual:

A special welcome is extended to **Ewen Duncan**, the first Associate Member / Individual of JOIFF. Ewen is active in working with Emergency Services and has joined JOIFF to increase his knowledge and experience and to network with the Members.

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

Thinking of New Year Resolutions....???

A philosophy professor stood before his class, picked up a very large, empty mayonnaise jar and proceeded to fill it with rocks, about 2" in diameter. He then asked the students if the jar was full. They agreed that it was.

The professor then picked up a box of pebbles and poured them Into the jar. He shook the jar lightly. The pebbles, rolled into the open areas between the rocks. He then asked the students again if the jar was full. They agreed it was.

The professor next picked up a box of sand and poured it into the jar. The sand filled up everything else. He then asked once more if the jar was full. The students responded with a unanimous "Yes."

The professor finally produced two cans of beer and proceeded to pour their entire contents into the jar, effectively filling the empty space between the sand.

The professor said "I want you to recognize that this jar represents your life. The rocks are the important things - your family, your partner, your health, your children - things that if everything else was lost and only they remained, your life would still be full. The pebbles are the other things that matter - like your job, your house, your car. The sand is everything else. "The small stuff." "If you put the sand into the jar first," he continued "there is no room for the pebbles or the rocks. The same goes for your life. If you spend all your time and energy on the small stuff, you will never have room for the things that are important to you. Pay attention to the things that are critical to your happiness. Play with your children. Take time to get medical checkups. Take your partner out dancing. There will always be time to go to work, clean the house, give a dinner party and fix the disposal. Take care of the rocks first - the things that really matter. Set your priorities. The rest is just sand.

One of the students raised her hand and inquired what the beer represented. The professor smiled. "I'm glad you asked. It demonstrates that no matter how full your life may seem, there's always room for a couple of beers."

THE EVE OF DESTRUCTION FOR HALON GAS

DASCEM Europe

Unless you have been heavily preoccupied in recent months, you should already be well aware of the impending deadlines for the decommissioning of Halon fire suppression systems. Article 16 of EU Regulation 2037/2000 bans the recharge of non-critical Halon systems from 31st December 2002 and also requires the complete decommissioning of such systems by the end of 2003.

Responsibility for the removal and correct disposal of Halon lies squarely with the system owners, who will need to seek professional advice. There are two distinct issues to be considered. Firstly, which fire suppressant agent will they use instead of Halon? Secondly, what practical measures must be taken to dispose of the outlawed gas?

The various Halon 'alternatives' - carbon dioxide, inert gases and chemical agents - each have their own advantages and limitations in specific applications. Choosing between them can be a complex business, and it is a common mistake to assume that a replacement gas can simply be accommodated in existing Halon cylinders. The whole issue of Halon replacement requires expert guidance from specialist fire engineers.

Dealing with our Halon legacy

For building engineers, the question of how best to decommission and dispose of the gas in Halon systems is another issue upon which clients will need to seek urgent advice. Failure to dispose of the Halon properly will be costly for systems users as well as the environment. Releasing the gas to the atmosphere is a wholly unacceptable option. Not only will financial penalties will be levied on companies found to be disposing of the gas in such an unauthorised manner, but - more importantly - their irresponsible action would cause further irreparable damage to the Earth's ozone layer.

As EU Regulation 2037/2000 is enforced through statutory instruments, it will be an offence for Halon systems to be decommissioned by anyone other than specially certified personnel. This has led to the establishment of a registration scheme for Halon Decommissioning by British Approvals for Fire Equipment (BAFE) in conjunction with the British

Fire Protection Systems Association (BFPSA). The heart of this scheme is a Competence Certification Course (known in the industry as 'triple C') - a training course which covers all aspects of the decommissioning and gas removal process. Engineers who successfully complete the examination at the end of the course receive a certificate acknowledging their competence to carry out Halon decommissioning work in full compliance with legal requirements.

However, decommissioning of a system is really only half the story. Having removed Halon cylinders from a building, certified fire engineers must then decant and dispose of the gas in an environmentally safe manner. One option for Halon destruction is incineration - not an easy process for a fire suppressant gas! Burning Halon requires very high temperatures which, if not uniformly maintained, can result in the formation of toxic by-products. These by-products, known as 'the products of incomplete destruction' pose complex challenges in terms of safe disposal.

As an alternative to high temperature incineration, a process known as PLASCON™ (plasma conversion) technology can be used to dispose of Halon, and facilities for this will soon be available to Halon users in the UK and mainland Europe. The PLASCON™ process breaks down Halon molecules, reducing them to their constituent atoms and ions that are rapidly quenched and neutralised and discharged into conventional sewerage systems as salt water. This process is the most environmentally friendly method of destroying Halon that has yet been developed, and has been proven to be better than 99.999% effective.

The PLASCON™ process has already been used to destroy over 1700 metric tonnes of Halon and CFCs in Australia where equivalent legislation to EU Regulation 2037/2000 came into effect in 1993. Australian scientists investigated a number of available technologies and discovered the process of plasma conversion, whereby an organic liquid or vapour such as Halon could be injected into an Argon plasma (a state of highly energised Argon ions). The intense energy of the plasma breaks the stable carbon bond of the halon molecule reducing it to its constituent elements. These elements are rapidly cooled and quenched in a neutralising liquor to form a harmless and highly diluted brine (salt) solution. This rapid thermally initiated chemical process produces minimal levels of carbon dioxide as an off-gas emission, and negates the possibility for any discharge of dioxins, furans or nitrous oxides (Nox) - toxic by-products which are a possibility from other destruction methods such as incineration in the presence of oxygen.

The resulting aqueous (salt water) effluent from the PLASCON™ is safely discharged into the sewerage system under a Trade Consent where it actually performs a useful cleansing function as it passes through the sewage pipes, helping to keep them clean.

Turnkey solution for the UK and Europe

The Australian Government entrusted responsibility for all aspects of the Halon collection, management and destruction program in Australia to its former commercial business, the Department of Administrative Services Centre for Environmental management (DASCEM), including use of the PLASCON™ process. DASCEM was privatised through a management buyout in 1997 and continues to manage the Australian halon program for the Government under contract to Environment Australia.

Drawing on the expertise of DASCEM gained from its Australian and other international activities, a new independent company called DASCEM Europe has been formed to provide the same halon and CFC recovery and destruction service in the UK and mainland Europe.

DASCEM Europe will shortly be opening a state-of-the-art Halon decanting and destruction plant in the North East of England. It will accept and destroy Halon from any fire safety engineering company that has attained certification for its engineers through the BAFE 'triple C' registration scheme. Customers will be supplied with dated certificates to prove that they have had their Halon destroyed (converted) in an environmentally safe manner.

DASCEM Europe will operate the PLASCON™ process using the latest computer controlled technology which ensures that any deviation from normal operating parameters causes the system to automatically shut down. In this event, the risk of any Halon escaping into the atmosphere is negligible, since there is only ever a few millilitres of the gas present in the Argon plasma at any given time. The plant will conform to all relevant local, national and international environmental standards. ISO 9001 certification is currently being obtained for the facility, whose initial destruction capacity will exceed 800 metric tonnes per annum.

In addition to destroying Halon gas, DASCEM Europe will bring together a network of market specialists to provide a unique support service to Halon users. The organisation is a joint venture partnership between, Kidde Plc - one of the world's leading fire protection and safety specialists; SPI (Fire Engineering) Ltd - one of the UK's leading fire trade suppliers for mechanical installations and services for gaseous extinguishing systems; and DASCEM Holdings Pty Ltd. By drawing on the expertise of each partner, DASCEM Europe can offer a complete turnkey solution for Halon users, providing a quick, safe and environmentally superior means of disposing of the gas whilst also providing expert advice on alternative fire suppression options.

Information about the safe decommissioning and disposal of Halon is available from DASCEM Europe


HALON
All Systems must GO!
NEW EU LEGISLATION
31st DECEMBER 2002
After the end of 2002 discharged Halon fire suppression systems cannot be refilled and by the end of 2003 all such systems must be removed and the Halon safely destroyed.
Dascem offer an environmentally superior, highly effective and completely safe Halon destruction process.
If you are a company relying on Halon-based fire suppression systems your business may be at risk.
For simple no nonsense advice talk to us today
0800 783 6508
DASCEM Europe
DESTROYING HALON NATURALLY
A Kidde Company

on 0800 7836508. Alternatively, readers can visit the facility's web site at www.dascemeurope.com.

Note: The patent for the PLASCON™ plasma conversion process is jointly owned by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and SRL Plasma Pty Ltd (SRLP). The PLASCON™ trade mark is owned by SRLP and is also used by DASCEM under licence.

Details of the patient and trademark can be provided on request.

Editor's Note:
DASCEM Europe is a joint venture between Kidde plc, DASCEM and SPI Fire Engineering.

JOIFF IFE SEMINAR

Over 60 people attended the Seminar entitled "Action, Reaction and Research Tackling the Modern Day Threats to Society, A Trans-Atlantic Perspective", jointly organised by JOIFF and the Institution of Fire Engineers (IFE) and held in the Reebock Stadium, Bolton, England on 29th October 2002. Unfortunately, the threatened strike of the UK Fire Brigades Union meant that a number of persons from JOIFF, Municipal Fire Authorities and other related fields, could not attend.

The keynote Speakers at the Seminar were Nelson Bryner and Randy Lawson, of NIST, the United States National Institute of Standards and Technology, who travelled to the UK specially for the event. The Seminar was officially opened by John Judd, International President elect of the IFE who welcomed the new association of JOIFF and the IFE and introduced the Chairman for the morning session, Gary Douthwaite, Chairman of JOIFF. The Chairman of the afternoon session was Dr. Bob Docherty, Chairman of the Education Committee of the IFE.

Nelson Bryner gave a comprehensive overview of the work of NIST which covers a huge area of activity from the development of Information Technology for Fire Safety uses, to Material Science and Engineering, from Building and Fire Research to Chemical Science and Technology - and almost everything in between ! Both Nelson and Randy's field is Fire Research, where the Fire Loss Reduction Goal has been targeted under the headings of reduction in residential fire deaths, reduction in line-of-service firefighter deaths and burn injuries, enabling engineered Fire Safety and reduction of firefighter and occupant vulnerability in Homeland Security.

In his second Paper, Nelson presented some fascinating examples of the type of work NIST is doing in developing Fire Modelling and how these computer models can be used not only to investigate incidents that have occurred, but also to improve knowledge and therefore safety by examining different exposures and scenarios on the models. He emphasised that Models are not actual events and outlined the efforts being taken to more closely link the two.

Randy Lawson discussed Firefighting Environments and the Limits of Firefighters Protective Clothing and Equipment. He listed Smoke, Gases, Heat and Structural Failure as the primary threats to Firefighters and victims needing rescue in Fire situations stating that approximately 80% of all deaths from fire in the USA are due to the effects of smoke and toxic gases. He explained that a considerable amount of the work of NIST is in establishing Safe Use Limits of Firefighters' protective clothing across the broad range of exposures that they experience in action and detailed the risk of burns from different conditions and exposures including the different levels of risk to Firefighters when the PPE is wet and dry, inside and out. Randy concluded this Paper by stating that Standards should better define and Firefighters should know the safe use limits of their protective clothing systems and that the tactics used should be matched so as to avoid putting Firefighters into environments that exceed these limits.

Randy's second paper discussed Fire Service Operations related to Chemical, Biological and Radiological Incidents and the extreme logistical and other difficulties in Emergency Responses to such Hazardous Materials Incidents and in decontamination procedures for Firefighters and Communities.

Simon Hunt of the Fire Research Division of the Office of the Deputy Prime Minister of the United Kingdom gave an overview of the work of the UK Building Disaster Assessment Group. The final Paper was given by Randy Lawson and covered NIST's plans for an in depth investigation of the World Trade Centre incident.

Those who were fortunate enough to attend this event had a most stimulating and interesting day and it is hoped that this very important Seminar will be the beginning of a long lasting and productive relationship between JOIFF, the IFE and NIST. The Seminar qualified those IFE Members who attended for 5 ½ hours Continuous Professional Development.

Care & Maintenance of Fire Fighter Garments

Dorothée Loosen, 3M

What makes good protective clothing for fire fighters?

- protection against heat and flames
- enhanced visibility at day and at night
- protection against wet and the cold
- protection against chemicals
- high level of wearer comfort

Fire Fighters are exposed to a variety of soiling. Residues of fire smoke, oils, hydrocarbons and other chemical substances e.g. acids or even the extinguishing agents are polluting the equipment, causing degradation of the components and weakening of the fabrics. Moreover, depending on the kind and degree of soiling the uniform could ignite. Contact with pathogen germs could cause health problems.

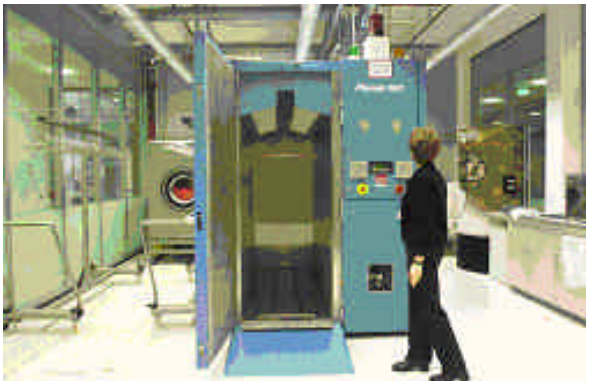
Keeping the FR-properties (flame retardant properties) of the garment is vital. Special laundering procedures have been developed to get the protective clothing hygienically clean by maintaining the functionality of the tunic.

Fire Fighter at work

In the past, most of these garments were washed at home together with the normal clothing. Now, to prevent contamination of the day-to-day wear with hazardous substances there is a trend to central washing. Many fire brigades have their own laundering equipment installed. Others are using the service industrial laundries are offering today.

All components of the garment need to withstand harsh laundering conditions. The outer shell fabric and the reflective material that would be directly exposed to heat stress as well as the barrier layer and the insulation must keep their functions for the approaching operation and prevent the firemen from serious burns. In this context, a good performing hydrophobic treatment e.g. with fluorocarbon is fundamental. This stops water from penetrating into the garment and thus enhances the heat protection of the clothing system.

Industrial laundering puts high demands on the garment. Fire brigades often uses washing machines of about 25 kg nominal capacity which is 5 times bigger than a domestic washing machine. Professional laundries, e.g. big laundry chains are taking care of more than 30.000 garments a week. To manage this, equipment with capacities often exceeding 90 kg or even continuous washing tunnels with a throughput of 200 kg load per hour is needed. The reduced cycle time of industrial laundering machines is compensated by the use of more aggressive detergent chemistry. Additionally the garments are exposed to enhanced abrasion, resulting from the drum agitation and high temperatures during washing and drying.



Laundering equipment at 3M Laboratories

How to wash?

As one never knows what potential contaminants remain on the tunic after an intervention, it is very important to immediately clean the uniform before it is stored, waiting for the next call.

The concrete laundering process certainly also depends on the kind of intervention. During a traffic accident, the risk of contamination with body fluids is high and thus, disinfection might be recommended. In case the garment is often spoiled with aggressive substances typical for technical operations or any kind of liquids, the oil and water repellent fluorocarbon treatment possibly will need to be refreshed regularly.

A complete procedure for the cleaning of firefighters garments by laundering is:

- 1 or 2 wash cycles - prewash or main wash

(where detergent is introduced)
- 3 to 4 rinse cycles - rinses using water
- hydrophobic treatment cycle - water/oil repellent agent is added
- drying cycle at high temperature

Care & maintenance guidelines recommended by the manufacturer help the laundry or the responsible persons at the fire brigade to apply a suitable laundering process.
Garments should be washed separately from non-intervention clothing to avoid deposition of contaminants, especially to one's own family, when washed at home. Before putting the load into the machine all pockets should be cleared out; zippers closed to prevent damage of the barrier layer and the fabric and exposed Velcro should be covered keeping away loose fibres that potentially could catch fire. Pre-soaking and scrubbing is not recommended.

Washing:
The machine should be loaded up to 70% of its capacity to allow a good soak of the clothing. High water levels in the drum ensure an appropriate mechanical action. Washing temperatures not higher than 60°C are usually sufficient. Higher temperatures would accelerate the wear of the clothing. Mild detergents ensure that the deterioration of the garment components is limited but still provide visibly clean results. Colour detergents with a medium alkalinity, not exceeding a pH of 10.5 are commonly used.

Rinsing:
Sufficient rinsing ensures that there are no detergent/cleansing agents remaining on the protective garment after laundering. Besides, spinning cycles between the bathes reduce the suds transfer.

After treatment:
3-4 rinses followed by a hydrophobic treatment to freshen the waterproof and oil-repellent properties of the uniform are standard. The water repellency could quickly be checked by bringing the fabric into contact with water. If the drops remain in a round form (high contact angle Q; fig.1) the function of the treatment is satisfactory. Certainly the hydrophobic treatment must not interfere with the FR properties of the clothing. Thus, only appropriate products should be selected.

Drying:

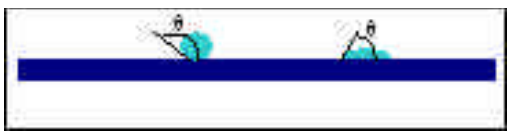


Fig. 1: Example of contact angles

Laundering equipment at Neusss Fire Brigade

Tumble-drying is the preferred method, at temperatures not exceeding 80°C on the fabric surface. Exposure to high temperatures is important to achieve a good curing of the hydrophobic treatment, too. Modern tumblers have sensors that could be adjusted accordingly. After about half of the drying time the garment should be turned inside out preventing the outer shell from becoming over-dried whereas the inside still is wet. The turning also ensures that no water pockets remain due to unfortunate arrangements of the watertight barrier. The garments should be put back to storage only when they are completely dry.
A comparison between care & maintenance at the brigade or at professional laundries shows that both possibilities have benefits.

Care & maintenance at the brigade:
- If necessary, protective clothing is available again within 2 - 3 hours, which reduces garment stock.
- Immediate washing after an intervention is practicable.

Care & maintenance at the industrial laundry:
- It is the responsibility of the laundry to provide clean and intact clothing. No person at the brigade has to be in charge of the laundering.
- Reduced environmental issues due to purification systems and reprocessing of wastewater minimise pollution of ground water with effluents from washing.
- Specially designed washing machines allow the clear separation between the "unclean" (contaminated) and the "clean" side. In fire stations that differentiation is often not possible.

Finally, the user should take care that his gear is kept clean and functional.

About the Author:
Dorothée Loosen joined 3M in July 1995 as Technical Service Engineer in the Safety and Security Systems division. Her main focus is on industrial laundering, being responsible for research & development projects in the Personal Safety Products department.

Established Institution seeks mature candidates for long term professional relationship.

John Judd QFSM, International President Elect of the IFE

Which Institution?

The Institution of Fire Engineers is the international learned and qualifying body for fire engineering professionals. The Institution has nominated-body status with Engineering Council (UK). Founded in 1918, the Institution has been influential in promoting the science and practice of fire extinction, fire prevention and fire engineering and the development of standards for fire engineering professionals world-wide.

What does this mean to me?

Discussions with members of JOIFF at the recent joint seminar at Bolton's Reebok Stadium, identified that members of JOIFF could be missing out on membership of the Institution of Fire Engineers. Many members of JOIFF are experienced fire safety professionals who have reached high standards of professional development. The IFE recognised, some years ago that not all fire professionals could or would go through a traditional examinations and academic driven development route. As a result, the Institution developed a process of assessing the qualities of fire professionals and offering them the appropriate grade of membership that would properly recognise their professional status. The Institution now has three routes to membership; via academic/examinations, an individual case procedure and a Mature Candidate Route. Each of these routes requires the candidate to demonstrate they have received appropriate training, have suitable experience and in some cases have a record of their continuing professional development. The difference between the routes is how the candidate demonstrates their academic ability.

Who is the Mature Candidate Route for?

The purpose of the mature candidate scheme is to provide a route to membership of the Institution of Fire Engineers, in the grades of Graduate (GIFireE) and Member (MIFireE). This route is available for those persons who do not have academic qualifications acceptable to the Institution, but who are able to demonstrate that in later life, they have achieved a standard of professional competence comparable to their contemporaries who have achieved their grade of membership by the academic route.

The Institution recognises that fire engineers operate in a broad discipline and may come from diverse professional backgrounds. The Institution seeks to provide access to its grades of membership in as flexible a way as possible, consistent with maintaining standards of professional competence.

So what do we mean by mature?

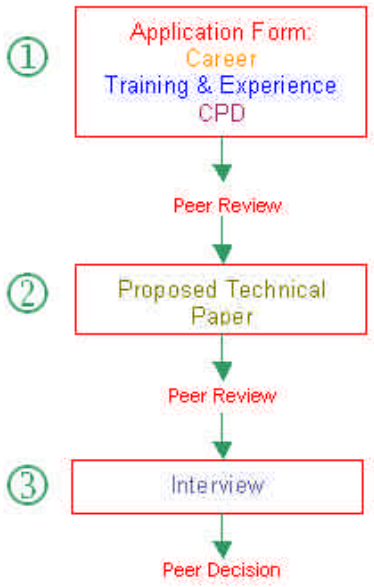
Applicants for membership via the mature candidate route should:

- Normally be at least 35 years of age at the date of application
- Have followed a career path that demonstrates increasing levels of responsibility and experience in fire engineering over a period of at least 15 years for Member grade or 12 years for the Graduate grade.
- Have attained a position clearly demonstrating a level of professional competence that is comparable with contemporary fire engineers in the relevant grade of membership.
- Provide records of two years Continuing Professional Development at a level appropriate to the grade applied for.

So in practical terms, this means that a senior manager of fire safety, who has between 12 and 15 years in the industry, could be eligible for membership of the Institution.

How does the Institution assess the applications?

The process is in three stages and involves, inevitably, an application form and details of your career, training and experience. Then, assuming this evidence supports your qualities, you must propose a subject for a technical paper. The idea behind this paper is to demonstrate you do have the same level of professional competence as your contemporaries in the relevant grade. Don't be put off by this, the sort of paper we would be



looking for is the kind of work you probably do on a regular basis for your employer. Then we interview the candidate about the paper mainly to establish it is "all your own work" and that it properly reflects your professional standing. The interviews are carried out by senior members of the Institution's membership

committee, and are all accredited as human beings! As you would expect, everything is confidential and is conducted fairly and transparently.

I hope to trial this process with one of your members shortly. I am sure the outcome will demonstrate this membership route is particularly relevant to the membership of JOIFF and can offer you the professional recognition you deserve.

If you would like more details or want to express an interest, please contact the Institution's Membership Department at:

The Institution of Fire Engineers, 148 Upper New Walk, Leicester, LE1 7QB

Tel: 0116 255 3654
Fax: 0116 247 1231
Email: membership@ife.org.uk

About the author:
John Judd QFSM was Chairman of the Membership and Branches committee of the IFE for a number of years. He is now the International President Elect of the IFE and will become its President in July 2003 at the IFE AGM in Manchester. John is Assistant Chief Officer, Head of Fire Safety in Greater Manchester Council Fire Service.

REFLECTIONS ON JOIFF

December 2002 concludes the second year of Fulcrum Consultants holding the Secretariat of JOIFF and presents a good opportunity to reflect on what has happened during that period.

History:
Fulcrum Consultants first became involved with JOIFF in the 1990s through its Sister Company GD Protective Clothing and Equipment Ltd. who is a Supplier of PPE and fire equipment to many Members of JOIFF. In November 1999, JOIFF and Fulcrum Consultants agreed to establish a Training Standards Group to develop accredited Training for Emergency Services Personnel in High Risk Industry. The first accredited Training Courses to JOIFF Standards took place in December 2000 and the success of these proved that JOIFF has a much greater mission than only to act as a vehicle for exchange of information - which had been the case until then.
In January 2001, Fulcrum Consultants was invited to become Secretariat of JOIFF with a view to working with JOIFF to develop it into a World Class Organisation representing Emergency Services Personnel in High Risk Industry. As there was no formal Management structure in JOIFF, a Constitution was written and accepted by JOIFF Members at their March 2001 meeting. As a result, an Executive was elected and systems of operation established between the Secretariat and the Executive.

Membership:
When Fulcrum Consultants began as Secretariat they identified very quickly that the Organisation must grow to survive and so they proposed to the Executive that an ongoing Membership Drive should be implemented. At the beginning of 2001, 24 High Risk Industries from 5 Countries were Members of JOIFF. At the time of going to press for this edition of The Catalyst, the Membership of JOIFF comprises 44 Organisations as Members and 9 Organisations as Associate Members, from 17 Countries.

Training:
At the outset, Fulcrum Consultants saw the development of JOIFF accredited Training as a business opportunity that would justify its commitment to JOIFF, but this has turned out to be a difficult area of growth. Whilst an increasing number of Members are participating in the Training, for a number of reasons, the volume of Training does not make it a "stand-alone" business. One of these reasons is that despite numerous and extensive visits by Fulcrum personnel, only three Training Establishments have been accredited to provide JOIFF accredited Training. Another difficulty is the geographical location of these Establishments - for financial and other reasons, many Members cannot send personnel and must train on their Sites or at local unaccredited Training Establishments. The problem of adequately servicing the Training requirements of Members is growing as an increasing number of Members from outside the United Kingdom become Members of JOIFF. Reacting to these problems, Fulcrum Consultants have now developed Site Specific Competency Based Training which is not only JOIFF accredited but is also cross mapped with the Preliminary Examination of the Institution of Fire Engineers.
Successful Students of any JOIFF accredited Training are issued with a Certificate of Qualification. Since JOIFF accredited Training has begun, several hundred JOIFF Certificates have been issued.

Regulatory Bodies:
Fulcrum Consultants continue to work with the Executive to ensure that the name of JOIFF and its activities are known to Government Organisations and Regulatory Bodies in Countries where JOIFF has

Members. As the Membership of JOIFF expands Internationally, it is essential that the Members provide the relevant contacts to the Secretariat so that this important work can continue to be productive.

Communications:

Fulcrum Consultants introduced the first edition of the official JOIFF Newsletter, The Catalyst, in March 2001. This has been produced and circulated every quarter since then, funded almost entirely by Fulcrum Consultants.

The JOIFF website was established in 2001 after considerable research and expense and has now become a vibrant and active site that provides an increasing amount of information relevant to Emergency Services Personnel in High Risk Industry and acts as an important International beacon for JOIFF in its development. The site is getting an increasing number of "hits" - more than 2000 for each of the past two months.

Seminars:

In 2001, a Major Seminar was organised by Fulcrum Consultants on behalf of JOIFF to highlight the future impact of the COMAH (Seveso II) Regulations and the liability of Management for negligent acts with the move towards legislation on Corporate Manslaughter. In 2002, in conjunction with the Institution of Fire Engineers, a Seminar was hosted which gave a platform to two excellent Speakers from the United States National Institute for Standards and Technology - a report on this Seminar is published in this edition of The Catalyst. These Seminars are important milestones, not only for JOIFF, but also in Continuous Professional Development for all those who attended.

Organisational Contacts:

Fulcrum Consultants has worked with the Executive to develop contacts with other Organisations with Aims and Objectives similar to JOIFF. A strong relationship has been formed with the Institute of Petroleum and the Institution of Fire Engineers and Fulcrum Consultants is continually working to develop work items with these and other potential contacts.

Representation:

In 2001, Fulcrum Consultants represented JOIFF and gave Papers at the Meeting of the European Oil Refinery Fire Chiefs in Hungary, and in 2002, they participated with the Chairman of JOIFF at the launch of JOIFF accredited Training by the Singapore Aviation Academy.

Finance:

Fulcrum Consultants provide the services of the Secretariat free of charge to JOIFF with the exception of direct costs of for example photocopying, stamps, website updates etc. This continues to be a major expense to Fulcrum Consultants and the GD Group which has not yet been recovered, but the commitment continues because of the long established policy of the GD Group to invest in the dissemination of information and development of expertise in Fire Safety matters.

Singapore Aviation Academy

The School of Airport Emergency Services of the Singapore Aviation Academy (SAA) provides training in fire protection and emergency management for Airports and High Risk Industry. SAA has an International reputation for excellence and during the past year, the JOIFF Secretariat and SAA have been in discussion with the aim of SAA becoming an accredited Training Provider of JOIFF accredited Courses. Members of the Emergency Services of High Risk Industry in Singapore and the Region were invited to participate in a meeting that SAA called in early November 2002 and Gary Douthwaite, Chairman of JOIFF and Alec Feldman representing The Secretariat, travelled to Singapore for the event and were welcomed by the Head of Emergency Services in SAA, Albert Sin Khiew Kei.

The well attended meeting was opened by Mr. Chan, Director of SAA, who gave some background on SAA and its strengthening ties with JOIFF. Alec Feldman gave a Paper on JOIFF, its History, its activities, the benefits of Membership and on the operating method and relationship between JOIFF and the Secretariat.

Gary Douthwaite then gave a Presentation on a major fire in the United Kingdom where he was Senior Fire Officer of the responding Occupational Fire Brigade. Gary covered a wide range of points that emphasised the benefit of effective pre-incident planning, the necessity of the availability of a ready supply of knowledge of site Hazards, the extreme importance and benefit of Occupational and Municipal responders working together, the effective use of specialised agents and procedures at the correct time, post incident investigation and he also responded to a number of questions from the audience throughout and after the presentation.

The meeting concluded with Alec Feldman explaining the principals of Competency Based Training and the approach that the JOIFF Training Standards Group has taken with this method in developing Courses for both Training Establishments and on Site applications.

The general feeling was that the event was extremely worthwhile and SAA are now preparing a follow up plan to introduce JOIFF accredited Training in the Region.

In close cooperation with international fire services and respiratory protection experts MSA have developed the new compressed air breathing apparatus AirMaXX to meet the highest requirements of safety, reliability and ergonomics

Using optimum ergonomics design, maximum mobility is allowed:
- The carrying plate is fully adjustable and results in a perfect fit for all body sizes, whether small or tall;
- Absolute freedom of movement is guaranteed by the S-swing of the shoulder straps;
- A swivelling hip belt follows the wearers movements;
- The optimized harness adds to the carrying comfort and the ergonomic profile of the breathing apparatus.

AirMaXX fits securely and safely yet leaves freedom for extreme movements. Furthermore the cylinder retainer facilitates ease of handling which allows fast exchange of cylinder

SCBA AirMaXX is designed to house electronic add-on modules that allows it to be linked with telemetric systems to the operations center that monitors the apparatus user by radio signals. ICU - the Integrated Control Unit for MSA compressed air breathing apparatus revolutionizes the current monitoring systems for breathing apparatus with numerous information and warning options. After automatic activation, the ambient temperature and the cylinder pressure are measured and these figures as well as the calculated remaining service time are indicated on an illuminated display.

An integral motion sensor and the option of activating a manual alarm in emergencies provides additional safety.

The slip-proof, shock absorbing housing with the elastomer stripes and the ergonomic operating parts result in optimal handling.

This outstanding design was honoured with the world-wide recognised and prestigious prizes of the product design industry, the RedDot Award 2001.

reddot

MSA

MSA (Britain) Limited
East Shawhead, Coatbridge ML5 4TD
Scotland.
Tel: 01236 424 966 Fax. 01236 440 881
Customer Support Line: 01236 702 216

"THE REACTOR COLUMN."

Write to The Reactor, Mr. R., with comments, problems, ideas or anything at all that you would like to be heard. The Editors may decide not to print a letter or part of a letter and letters may be edited. No letter will be published unless the name and address of the Writer is given to the Editors, but names and addresses will not be published without the writer specifically requesting it.

Hello Readers.

The United Kingdom Firefighters strike has certainly been a wake-up call for all those with responsibility for Site protection. In my column of the March 2002 edition of The Catalyst, I asked "How many JOIFF Members base their Emergency Plan on the best possible scenario pre determined attendance of the Municipal Fire Service?." I suggest that, certainly from the United Kingdom Members of JOIFF, the answers will be very different today than they were in March, because now, it is they who are "carrying the can" if an incident occurs and there is little or no chance of getting the type of support of manpower and equipment that was available before the Strike. Prior to the strike, a communication from the UK Health and Safety Executive (HSE) said that they believe that "…..the existence of a firefighters strike should not in itself cause legitimate industrial or commercial activities to be stopped. All employers should consider the possible implications for their business and if they identify any additional risk of harm to their employees and/or the public they should draw up and implement contingency plans……HSE's view is that we would not seek to interfere with normal operation of plant and premises and would expect operators to consider contingencies as set out above…"

We have learnt from some of our newer Members in Countries other than the UK, that they are always on their own when it comes to dealing with emergency incidents, either because of their distance from Municipal support or because of the total lack of Municipal support. I am sure that we all hope that the Firefighters dispute in the UK will be settled speedily but UK Members should use this experience - at the time of writing, an ongoing experience! - to ensure that when the Municipal Brigade returns to work, the emphasis of having the ability to protect your own Site is not reduced.

This ability is achieved by a combination of a number of factors one of which is effective Training. It is encouraging to see the growing number of Emergency Services Personnel receiving JOIFF accredited Certificates of Qualification in a number of Competencies. It is equally encouraging to learn that those participating in the Training Courses are enjoying the experience as the following two letters that I have received attests to:

Dear Mr. R,

We found the JOIFF 3 day Occupational Firefighter (Part Time) Basic Course at Teesside a very useful course. The course was well structured with a good balance between theory and practical. The instructors were excellent, with a good attitude towards us, using excellent training methods and were at all times very clear about each of the exercises. The instructors at all times maintained the highest standards of safety and each exercise was concluded with a substantial debrief.

I found that the course has been a great advantage to me and now I have a sound knowledge of, and confidence in, the equipment which is used here on site. The fact that the equipment used at the course site is exactly the same as the equipment we have on site was a massive advantage. The facilities offered by the training centre were excellent, including good classrooms, good drying rooms, large set up on the burning ground with many props, good food in the canteen and good BA facilities. I would highly recommend the course to all auxiliary firemen.

Yours etc.

JS

Dear Mr. R

The JOIFF 5 day Team Leader Course at Teesside was well organised from the beginning to the end, all the staff at the IFTC were very professional all round and very helpful. The content of the course was fair but I think it could do with being of a longer duration possibly two weeks, to include a night exercise if possible and reduce the amount of B.A. use internally. Although the issue of the amount of B.A. usage internally was discussed, the conclusion was the course was designed to cover all types of industrial sites, not just refinery's and their open work area's - which was fair comment.

Special mention should go to the two instructors who were excellent, had good attitudes and were very interested in the job. This created a knock-on effect with the Students as it made them all interested and bond together as a Team. The Fireground support Staff were excellent and all the exercise fires were set up in time as per the programme. The classroom theory part of the Course was made enjoyable hence kept an interest for all concerned. There was no waiting around for BA sets to be issued as they were all fully cleaned and serviceable - credit to the BA servicing Staff. The food at the IFTC canteen is worth a mention as it was very nice.

There were some negatives which we discussed with IFTC and they agreed to follow up the points raised. Overall from my point of view it was a course which is very beneficial to all those who are Fire Team Leaders, or do cover this position as and when required.

Yours etc.

GB

JOIFF Training Notes

Since the JOIFF Training Standards Group was established, the aim has been to provide Training that will result in qualification for the full spectrum of the Emergency Services personnel of JOIFF Members. JOIFF now has a range of Competency Based Training (CBT) Courses that can be presented at accredited Training Establishments and the new JOIFF accredited CBT portfolio can be used on Site either to train new recruits or to act as an on-going Station Training Programme for experienced Firefighters. The CBT portfolio is made up of Units and Elements and allows core competencies to be included in a Site specific Training Programme which can lead to, where desired, Certification to the Preliminary Certificate Examination of the Institution of Fire Engineers.

Training continues in the UK although Site commitments as a result of the Municipal Firefighters strike have had an impact on some Courses. Subject to availability of Students, the following Courses are booked in the JOIFF accredited Training Establishments in the UK for 2003.

Programme for 2003:

Dates	Detail	Venue
January 7th - 8th	2 day Practical Firefighting Course	Washington Hall
January 20th 22nd	3 day Occupational Firefighter (Part Time) Course	Washington Hall
February 3rd - 4th	2 day Practical Firefighting Course	Washington Hall
February 10th - 12th	3 day Occupational Firefighter (Part Time) Course	Washington Hall
February 17th - 21st	5 day accredited Team Leader Course	IFTC Teesside
March 12th - 13th	2 day Firefighting Course	Washington Hall
March 18th - 20th	3 day Occupational Firefighter (Part Time) Course	Washington Hall
April 28th - 30th	3 day Occupational Firefighter (Part Time) Course	IFTC
May 1st - 2nd	2 day Practical Firefighting Course	IFTC
May 12th - 16th	5 day Team Leader Course	IFTC Teesside
September 15th - 19th	5 day Team Leader Course	IFTC Teesside
October 6th - 8th	3 day Occupational Firefighter (Part Time) Course	IFTC
October 9th - 10th	2 day Practical Firefighting Course	IFTC
November 17th - 21st	5 day Team Leader Course	IFTC Teesside

All Courses are JOIFF Accredited.

Further details on Modular Training on Site and on any other aspect of JOIFF Training can be obtained from the JOIFF Secretariat, Fulcrum Consultants - detail below.

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JOIFF Secretariat:

Fulcrum Consultants

GD House, Tallaght Business Park

Dublin 24, Ireland

Telephone: + 353-1-4137300; Fax: +353-1-4137301

Website: www.joiff.com Email: info@gdgroup.ie

JOIFF in Partnership with

FULCRUM CONSULTANTS