



EUROPEAN FIRE SPRINKLER NETWORK

September 2007 Report

We made good progress in September. Bernadette was part of a team which supported Ann Jones of the Welsh Assembly to launch a campaign for sprinklers in all new housing in Wales. She was also part of a group which persuaded the new Stockholm Fire Chief to launch a similar campaign in his area.

I made some useful contacts with legislators in France, Iceland and Switzerland, all of whom were positive about sprinklers. I have agreed follow-up meetings in France and Switzerland. The French Government is evaluating whether fixed fire fighting systems are the solution to upgrade fire safety in existing bi-directional tunnels.

Interflam

Interflam is a bi-annual, international fire engineering conference. This time it was held near London. I made some useful contacts, such as the Icelandic Fire Marshall, and learned of several relevant research projects which will promote sprinklers and water mist in the academic community. For example CETU, the French Government tunnel research organisation, is looking at the benefits of fitting fixed fire fighting systems in existing bi-directional tunnels as an alternative to upgrading the longitudinal ventilation system to a transverse ventilation system. CETU has already determined that the costs are much lower so they are evaluating the relative and absolute performance in terms of maintaining a safe environment against different fire sizes.

For fire engineers to include sprinklers in their designs they must assume a figure for system reliability. John Hall of NFPA presented data on this. Overall NFPA found that 93% of systems operated when they should and that 98% of these controlled or extinguished the fire. However, John agreed that the NFPA dataset excluded many fires successfully extinguished by one or two sprinklers before the fire brigade was called. He said that it was often estimated that this applied to 75% of industrial fires. Therefore the true success rate is considerably higher than calculated by NFPA.

PNISI

In Paris I attended a seminar to announce the findings of the French Government-sponsored committee, PNISI, which is studying how to introduce fire engineering in France. At present the French building code does not allow other solutions to its prescriptive, passive measures. One presenter showed the different approaches taken to the SFPE design study of a high-rise building containing shops, a home for the elderly and a hospital. The French solution was the only one not to include sprinklers. Instead it had twice as many staircases as the other solutions; it imposed smaller windows to prevent external fire spread; it required very large air inlets for smoke

extraction and a smoke lobby between fire compartments. This solution was more expensive and left less rentable area. It was clear to all that there is a need to permit other solutions, such as sprinklers.

At this seminar I again met Colonel Alex Maire, who provides the technical input to the French building codes and who told me that his opinion of sprinklers had considerably changed and he now regarded them much more positively. I also met his boss, Jean-Pierre Petiteau, who agreed that I should visit him in Paris in October for an in-depth discussion.

SFPE French Chapter Study Tour of US

With the French Chapter of the SFPE I visited in the Washington, DC area the National Institute of Standards and Technology, the Federal Bureau of Alcohol, Tobacco and Firearms, the SFPE and the University of Maryland. We then travelled north to visit the FM Global research campus in Rhode Island. Several of those on this study tour are members of the PNISI committee so it was useful for me to meet them. They included representatives of the Central Laboratory of the Paris Prefecture, which is part of the police and which includes arson investigation in its responsibilities. I agreed to visit the laboratory in November. Its Deputy Director was very positive about sprinklers but was unaware of the practical experience and data supporting their use.

On this tour it was helpful that at each location we visited the scientists voluntarily praised the benefits of sprinklers. At the ATF we saw a burn test in a mock-up of a room, which demonstrated how quickly flashover occurs; at the University of Maryland we saw the test rig where data is being generated to support the modelling of water spray in the FDS fire modelling program and at FM Global among other things we saw a fire test in rack storage with water application.

Another good contact on the SFPE tour was the AHJ of the Swiss canton of Vaud, which includes the city of Lausanne. He was very supportive of sprinklers and felt that they should gain more recognition in Swiss codes, suggesting that the very strong detection lobby may have held back sprinklers in Switzerland. He promised to introduce me to the canton association, VKF.

Sprinklers in Homes in Wales

With Ian Gough of BAFSA, Bernadette Hartley joined a small group who visited Ann Jones, a Member of the Welsh Assembly who worked for 30 years in the fire service. She introduced a proposal to require sprinklers in all new homes in Wales. Her proposal won a ballot in the Welsh Assembly, which was its first hurdle but it still has several legislative stages through which it must pass before it can become law.

Meetings in Sweden

Bernadette went to Sweden where with Gösta Holmstedt of Sprinklerfrämjandet she met politicians, representatives of the Swedish Rescue Service and the new Stockholm Fire Chief. He was very interested in the campaigns to see sprinklers in

new housing in Glasgow and Wales and now wants to start a similar campaign in Stockholm.

Geneva Association

While I was away Bernadette spoke at the Geneva Association conference on fire statistics, which was held in Paris. Sprinklers generally were spoken of positively. She highlighted that fire costs our economies at least 1% of GDP and that this could be significantly reduced with sprinklers.

UK Ministerial Meetings

Bernadette has arranged two meetings on 1st and 6th November with the UK Ministers for the fire service and for building codes. The first meeting is to discuss Europe and the second the UK.

Clarke UK

At the BAFSA meeting in Scotland I met the management of Clarke UK, the manufacturer of diesel engines for sprinkler pumps. Clarke agreed to join the EFSN. In October I will visit SPP Pumps, who may also join the EFSN.

Modern Methods of Construction

Bernadette and I visited BRE north of London to look at the prototype new houses constructed on their site. These houses are showcase designs for houses that can be built more quickly and that have a smaller environmental footprint both in construction and use. None of them comply with the fire safety building code but in some of them a sprinkler system had been fitted to allow open plan designs and open staircases. In the UK staircases have to be enclosed with fire resisting construction. This makes it difficult to use natural ventilation to cool a building. Open plan designs achieve this with natural thermal effects and reduce lighting needs by making better use of natural light.

Next Steps for Alan and Bernadette

- 1) Participate in sprinkler seminar in Greece.
- 2) Visit Jean-Pierre Petiteau in Paris.
- 3) Attend CEN/127 meeting in Prague.