



EAPFP calls for improved standards for fire engineering across Europe

The European Association for Passive Fire Protection is spearheading a campaign to raise standards in fire engineering across Europe, amid concerns that the discipline is often used by some engineers to reduce levels of protection rather than ensure adequate fire safety for buildings.

The EAPFP's campaign focuses on the need to ensure adequate training and monitoring of fire engineers, through continued professional development schemes; a call for improvements in the verification of fire engineering strategies presented at the design stage of a building; and continuous maintenance and verification of the strategy throughout the lifetime of a building.

EAPFP President Vicente Mans declares:

“While it is clear that fire engineering has an increasing role to play as more innovative and complex buildings are developed, we must be sure that the move away from prescription to fire engineering is not an excuse for value engineering.

“Fire engineered solutions are often used to engineer down the levels of protection within a building as far as possible. Since there are also concerns that high quality materials specified in a design may also be substituted for less suitable products during construction, the EAPFP believes there is a danger that many of today's modern constructions will fail to offer adequate protection in the event of a fire.”

EAPFP Vice President Joric Witlox explains further:

“Fire safety engineering is based on assumptions and mathematical modelling but fire development and the behaviour of structures in fire cannot always be predicted. Standards and models are used to simplify reality and yet often standard fire curves and worst case scenarios are dismissed. Such solutions introduce many more uncertainties, increasing the level of uncertainty of the final result.

“THE EAPFP believes that because fire is not predictable, it should never be modelled without the use of suitable data from fire tests conducted by an accredited institution. Only then can the models and calculations result in any credible conclusions.”

The Association believes that keeping the skills and understanding of fire engineers up to date is vital and recommends that practicing fire engineers are offered greater access to continuing education throughout their working lives. Similarly, adequate forms of verification must be put in place for fire engineered strategies.

“Fire engineering as a discipline is fairly new and, with modern methods of construction and materials constantly being developed, all fire safety engineers need to ensure their skills and knowledge are up to date,” says Mr Witlox.



News Release 06: DECEMBER 2013

“While in most European states fire engineers must have a bachelor’s or master’s degree to practice, there is no consistent requirement for this academic training to be matched with relevant experience.

“A professional fire engineer must be able to demonstrate expertise in a wide range of disciplines from theoretical fire dynamics and modelling to human behaviour, as well as knowledge of all the available active and passive protection systems and their performance in the event of a fire.

“To work successfully a professional engineer must also have skills in negotiation and diplomacy since they will be part of a large multi-disciplinary team. These softer skills, as well as detailed technical knowledge, can only be developed with experience. Every country should place a requirement on engineers to demonstrate through continuous professional development that their skills are a combination of academic knowledge and on-the-job experience and training.”

While several countries have schemes in place, for example the USA, Singapore, UK and Italy, the EAPFP would like to see official recognition of experience more commonplace, through the introduction of certification schemes, such as the VLAREL scheme proposed in Belgium. The Department of Environment, Nature and Energy’s proposed registration scheme will require each professional to apply for a permit to work and adhere to strict working practices.

The EAPFP also recognises that those tasked with verifying fire engineered strategies must be suitably qualified and that information about installed protection must be passed on to building occupiers in a form that they are able to understand. EAPFP Technical Officer Niall Rowan explains:

“Fire engineers often reduce the level of installed fire protection in a building by using fire modelling to demonstrate that any fire within the building will be less severe than the ISO curve, for example, and therefore a lower level of protection is needed.

“The use of alternative strategies such as smoke exhaust ventilation, fire safety management and the implementation of a fire strategy is also commonly used to justify removal or downgrading of compartmentation.

“Any change to building use, layout, content, or materials of construction can have serious implications on the fire engineering strategy by compromising protection systems or increasing the fire load.

“Furthermore, fire engineered buildings rely on a fire strategy that may be heavily dependent on fire safety management, for example, the maintenance of sterile areas in atria. If the building is not operated according to the fire strategy, a significant risk of fire, or a higher severity of fire is likely.”

While in many European states building regulations require that a building is ‘signed off’ by a local authority, the EAPFP is concerned that the skills and experience of inspection bodies may not be adequate to deal with complex fire engineered strategies; and that there is inadequate checking that as built construction actually matches the design specification. Mr Witlox declares:

“There are third party certification schemes for products and installers that provide some comfort, but they are far from perfect since they are seldom mandatory.



News Release 06: DECEMBER 2013

“Furthermore, the role of private companies as auditors and inspectors of fire protection is increasing, and many of these will have inadequate training and experience. There are no EN standards for auditors and inspectors of fire protection. Anyone can call themselves a fire safety specialist.

“It is for this reason that the EAPFP is calling for greater-regulation of the fire safety engineering profession, backed by improvements in the training and development of fire engineers, including certification.”

For further information on the EAPFP, visit www.eapfp.associationhouse.org.uk; tel: +44 (0)1420 471616; e-mail: admin@eapfp.com

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Notes to Editors

EAPFP was formed in 1988 to act as a European voice on behalf of national associations representing manufacturers, contractors and other institutions involved in the fire protection to steelwork, timber, and other passive fire protection applications, including penetration seals and ductwork.

Countries represented by EAPFP members include Austria; Belgium; Cyprus; Denmark; France; Germany; Ireland; Netherlands; Russia; Spain; and UK.

The Association campaigns to raise the standard of fire safety in buildings and offers a range of publications and guidance notes in several languages. The EAPFP also has representation on the European Union Technical Committees involved in developing product standards across Europe.

For further information:

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