



October 2018

## IFC ENGINEERING ASSESSMENT PRINCIPLES

### TECHNICAL NOTE 3: IFC ENGINEERING ASSESSMENT CAPABILITIES

#### About us | International Fire Consultants Ltd

**International Fire Consultants is part of the IFC Group. The company is a specialist engineering consultancy delivering independent, honest and practical fire safety solutions to professionals across the built environment. The sought after fire safety advice protects life, preserves property and safeguards business continuity.**

International Fire Consultants was established in 1985 to provide high quality and impartial technical expertise concerning fire safety. Since then, our team of highly qualified Fire Engineers and Fire Safety Professionals have continued to deliver robust, innovative and cost-effective fire safety solutions, including Assessments, Designs and Inspections.

International Fire Consultants are able to lend their insight and practical expertise for: Fire Safety Engineering, Fire Risk Management, Product Evaluation, Fire Life Safety Systems, Expert Witness Testimony and Fire Protection Training, to developments of all sizes and complexities; from residential, education and healthcare structures to sporting venues, airports and iconic heritage buildings, such as historical royal palaces and stately homes.

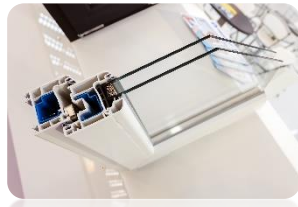
Recognised internationally as the go-to professionals in all aspects of fire safety, International Fire Consultants is one of the world's leading fire engineering and solution providers, trusted by many of the most prestigious construction firms, architects, manufacturers and estate owners.

This technical note demonstrates the capabilities of International Fire Consultants Ltd (IFC) to produce competent Engineering Assessments. As a multifaceted independent practice, comprising highly experienced Fire Safety Engineers and Product Specialists from a variety of backgrounds, IFC have unrivalled knowledge and expertise in fire safety regulations, standards, construction and fire testing.

IFC are committed to the constant improvement of the field of Fire Safety Engineering, and to this end are heavily involved in a plethora of Research & Development projects. Continuously striving to improve regulations, guidance and standardisation of practices throughout the industry is a key target which IFC aims to keep hitting.

IFC's engineers have experience conducting thousands of fire resistance tests, running test laboratories and include employees who are members of both domestic and international committees and have international reputations. Under contract to the British Standards Institute, and as Chairman of the British Standards Committee FSH22, IFC's founder Peter Jackman was responsible for authoring many fire resistance standards, most noticeably **BS476: Part 20 series**. Many current IFC Engineers worked closely with Peter for decades and continue to implement the engineering knowledge he imparted to them, not only by making Engineering Assessments, but also by passing his knowledge to the many engineering graduates employed by IFC.

Continuing Peter Jackman's legacy, IFC Engineers remain fully conversant with any changes to, or interpretation of, Fire Safety Standards by actively chairing and participating in many British, European and International Standards Committees. These committees help to promote and develop new standards and guidelines, based on a greater scientific understanding of fire safety in buildings. It is from this unique position that IFC can confidently offer trustworthy, impartial and honest opinions on any aspect of fire safety regulation.



## Satisfying design and site requirements, without compromising on materials or fire safety

Fire resisting assemblies are rarely supplied in an identical form to that which was tested. A fire resistance test report will therefore only cover the exact element and configuration that was tested and the subsequent result it achieved. No variations or opinions are expressed within the report.

IFC assists in satisfying architectural design criteria and specific site requirements by determining the acceptable flexibility, tolerance, and usage variations beyond the originally tested specification. Our opinion and expert judgements are expressed in the form of a concise Engineering Assessment, supported by numerical analysis and quantifiable methods, making best use of our experience and data from fire resistance tests on similar products. IFC only prepare Engineering Assessments where appropriate primary test evidence is in place for the base product.



## ACHIEVING APPROVALS

Many proposals for product specifications will likely require the product or system to be supplied at a size and in a mode (such as in relation to door assemblies with glazing apertures, glass, bespoke frames, building hardware, etc) which differs from that tested. If an approving authority does not feel technically able to make a judgement to cover such variations, or does not wish to take responsibility for them, then a third-party expert opinion is often sought.

These situations are when IFC's knowledge and experience become indispensable. Engineering Assessments provide confidence, minimise risk and ensure projects are able to progress on schedule and to specification, subject to being commissioned while the product is still in the design phase.

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## INDEPENDENT EXPERT OPINION

IFC provides independent expert opinion in all areas of fire resistance testing and produce substantiated assessments of the performance of fire resisting elements of construction under the prescribed fire test conditions. Engineering Assessment Reports derive expected product performance and are always based upon empirical fire test evidence.

Our objective is to ensure that our clients have immediate access to our extensive knowledge of the industry to ensure that appropriate products and materials, meeting the legal and stated performance criteria, are sourced for construction projects.

Engineers across our business regularly conduct comprehensive evaluations for clients from many industries and sizes, using an approach in which they consider every aspect of fire safety. Identifying risks, highlighting specific design requirements, determining the most effective products/systems for the project and ensuring they meet the regulatory requirements and relevant fire safety standards are all parts of the holistic service provided by IFC.

Technical Reports BS ISO/TR 12470-1 and 2, published by the International Standard Organisation (ISO), are standards that give guidance for the writing of Engineering Assessments of fire resistance performance.

IFC uses the best practice principles set out in these Technical Reports as a benchmark for making its own Engineering Assessments.

IFC remains independent of all product suppliers, installers and manufacturers; guaranteeing an impartial advisory service.

### OPERATING TO INDUSTRY STANDARDS

IFC have committed to and operate within the "PPPF Guide to Undertaking Assessments of the Fire Performance of Construction Products based on Fire Test Evidence". This latest version of the document which is cited within Approved Document B sets out the best practice, including competency requirements, for the preparation of Engineering Assessments. Operating within this guidance ensures that IFC's Engineering Assessments meet the relevant industry standards.

