



# IFC ENGINEERING ASSESSMENT PRINCIPLES

## TECHNICAL NOTE 3: IFC ENGINEERING ASSESSMENT CAPABILITIES

January 2019

**About us** | International Fire Consultants Ltd

**IFC are very proud of our reputation as one of the world's leading fire engineering solution providers; trusted by many of the world's most prestigious construction firms, architects and estate owners.**

Our holistic approach to fire safety ensures clients always receive bespoke best value advice and quality assurance for the lifetime of their projects. Indeed, we have lent our expertise to developments right across the built environment spectrum, from the necessities of Residential Education and Healthcare structures, to the more iconic buildings of the past, such as historic palaces.

Our highly experienced Fire Engineers, Fire Safety Professionals, CAD/BIM Designers and Commercial Team work in partnership with our clients to deliver an independent and unique top-to-toe fire safety consultancy service.

Our areas of expertise include: Fire Strategy, Computational Modelling, Product Assessments, Fire Testing Management, Fire Risk Management, as well as the design of Active Safety Systems, Fire Protection Training and Certification. We ensure that your buildings not only comply with relevant legislation but provide a safe environment for the occupants and users in the most cost-effective manner, that does not compromise the fabric of the building or overtly impact the architectural integrity of the designs.

**Confidence in fire Safety** |  
[www.ifcgroup.com](http://www.ifcgroup.com)

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.*



## 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.

## 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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