

The use of firewall technology in building construction

As we learn more about the Grenfell Tower disaster, the tragedy for our industry is that it has taken substantial loss of human life to force change that has been needed for decades.



Brett Harrington

At ISD Solutions we have been using composite panel technology for creating firewalls for many years, since the 1990s in fact. The concept of lightweight, durable, high-performance and flexible firewalls is not new. A culture of excellence over pricing is, however.

As product performance and testing continue to improve, the widespread benefits of composite firewalls are becoming more widely known.

We have seen significant growth in demand for high-performance, long-lasting solutions that are fast to install, aesthetically pleasing and completely demountable for re-use or re-positioning.

Design and installation, not just product, are essential

However, an additional yet equally vital aspect of this change in culture is the importance of design and installation to match the quality of the product.

Nowhere is the benefit of using the best products and installers more evident than in design details: the best-designed fire-protection packages cover all aspects of junctions and penetrations. A partition may have multiple types of penetration such as services, steel frames, pedestrian or industrial doors and windows, but each component is integral to create compartmentation.

So while there will always be a temptation to use a cheaper 'equivalent' product rather than an approved or specified one to gain the edge in winning work, it is vital to ask for the product test data to help decide whether that is the best product to ensure the fire does not breach the compartmentation.

Rarely is the best product the most cost-effective, and therefore the construction industry risks building with average products and unskilled labour to reduce costs. As with most things in life, you get what you pay for and using third-party

tested products and also a third-party accredited installer minimises risks.

However, we are finding that, finally, after many years of advocating proper certification for installations, the industry is starting to recognise the importance of doing things properly. If only because it has been proven that the costs of getting things wrong are potentially life threatening and very costly.

So what is the long-term solution? How can we create an industry where shortcuts are not taken, where the advantages of using quality products and installation across the board become more widely recognised?

The value of recognised third-party certification

It is more than a decade now since ISD took the decision to take part in BRE installer schemes and the Loss Prevention Certification Board (LPCB). BRE started third-party accreditation for installers after recognising that the problem with product testing was that the materials were only as good as the installation.

So we became part of the original uptake of the BRE's installer scheme for LPS1500, which is installing construction elements used to provide compartmentation in buildings. We continue to work with them with regular audits to ensure we conform with the latest standards.

With regards to fire-protection products, currently, the most relevant certification is LPS1531 from the Loss Prevention Certification Board (LPCB), which targets companies installing or applying passive fire-protection products. These two accreditations can be combined to create a certified fire barrier for a client and end user.

By selecting an LPS 1500 and 1531 approved company, clients can be sure their installers are appropriately trained and have the necessary expertise to install or apply the passive fire-protection product or system to deliver the project's fire-protection requirements.

The LPS1531 certification can cover many areas of passive fire protection, from seals to cladding, coatings, ductwork and dampers.

The benefits? Reduction of risk avoidance of costly mistakes, likely project inspection by the LPCB itself and confidence that your installer knows exactly what they are doing. And the main benefit to the client, main contractor and end user is the issue of a Certificate of Conformity. This is written confirmation by the installing company that the installation of the passive fire-protection product or system satisfies the project requirements, has been installed with the manufacturer's recommendations and has been suitably tested.

Benefits of leadership training

At ISD Solutions we have taken the challenging decision to lead from the top with our senior managers elevating their expertise to be among the UK's leaders in passive fire protection. Broadly speaking, those are measures usually integrated into the building, which take no action to operate (as opposed to sprinklers, for example, which are active protection).

There are several reasons for qualifying our senior leaders. There is a marketing benefit, of course, to being one of the few subcontractors in the UK who can genuinely boast industry-leading expertise. It builds trust and opens up opportunities in additional project scope.

However, training at the top also creates a top-down culture of excellence throughout our company, which is vital to the work that we do. Both our managing director Adrian Smith and I, as Divisional Manager, have sat and passed the most stringent examinations, completing the Level 3 Certificate in Passive Fire Protection from the Institution of Fire Engineers (IFE) during the past 18 months.

This enables us to have high-level conversations with clients and main contractors during the project planning phase, giving us the opportunity to lend our expertise at the very start of the scheme rather than being relied on simply to perform a limited role.

The impact on the subcontractor role

This is how we see the future developing. Using modern technology – in-house design capabilities, digital modelling – to offer expertise throughout the contract.

Subcontractors and contractors alike therefore need to step up their expertise, be able to communicate it properly and



▲ ISD Solutions on site at the Vaccines Manufacturing and Innovation Centre (VMIC) in Harwell, Oxfordshire.

▶ Our work at the Tunnelling and Underground Construction Academy (TUCA) in Ilford, London.



recognise the competitive advantages in striving for excellence as demands for safety become greater.

In our experience, construction companies often lack specialist knowledge and will gladly listen to expert advice, whether within the scope of our works or where fire protection is lacking or ineffective in other parts of a build.

That's why we now offer consultancy for certifiable fire-protection solutions and have recently invested in qualified resources and equipment to offer fire spraying for in-situ site steelwork.

So while the rest of our sector is beginning to catch up with values and techniques, some of which we have been extolling for a decade or more, we plan to continue increasing our levels of training – not only among management but through our teams, as well – to help us continue to stay ahead of the curve. If we can help set the standard for excellence and safety in our industry, then so much the better.

Supporting recruitment

Whether you agree with the current generation's approach to work or not, there is no doubt that the construction industry is going through a skills crisis. It is increasingly

difficult to attract the next generation towards a career in construction.

A forward-thinking company that is at the forefront of their industry will likely find its ability to promote these values to be a great support to recruitment.

Likewise, an ability to use cutting-edge digital technology to plan and design the most efficient and best-performing projects can only be appealing to an increasingly technically literate graduate workforce.

Over the past few years we at ISD have bolstered our in-house design department to a team of eight, with full BIM Level 1 capabilities and using Revit 3D modelling as standard.

It puts us way ahead of our competitors and is a major cost implication, but it benefits the client hugely, as we can collaborate with architects and contractors to detect clashes and potential issues before starting to construct.

We believe recruitment is another significant way in which we can play our part, improving skills and helping us become an example for others to follow.

▶ For more information, go to www.isd-solutions.co.uk/divisions/firewall

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