Middle East Focus:
The Journey Towards Approval

David Mills, Head of Forster Profile Systems Middle East & South Asia and Manish Karkera, Sales Manager, SCHOTT discuss fire safety in construction

Forster and Schott provide fire-rated glazing systems that include doors, windows, facades, doors, lights and anything to do with glass and fenestration. The companies have been around since the nineteenth century.

"We provide passive fire protection systems, which use a combination of Forster frames and Schott glass, our fire-rated glazing systems include doors, windows, partitions, stick-system facades and roof-lights. Our companies have been in business since the nineteenth century, and we provide systems to the international construction industry."

Recent high-profile fires have brought fire safety in construction to the forefront of the local authorities attention, and we have seen both the UAE fire codes and the local Civil Defense requirements for approval, upgraded significantly. For us, this has leveled the playing field, and now all companies operating within the UAE are mandated to comply with this regulation, and the opportunity for none-compliant systems entering the market has all but vanished.

Although these changes have resulted in some challenges to get the necessary approvals, we are glad that they are in place, because in the long run we are committed to fire safety and it is only right that companies should prove their capabilities before they can take a share of the market.

The biggest shift in these new regulations has been to transfer certification responsibilities from the system suppliers, such as Forster, to the local fabricators, such as White Aluminum, a company based in Abu Dhabi and with operations all across the UAE. A few years ago companies like Forster could register their systems through their local agent, obtain Civil Defense Approval and then pass on these approved systems to other local UAE fabricators. Of course, there were always QA/QC measures in place, but ultimately the system supplier was responsible for obtaining approvals and then training the local fabricators to follow manuals and adhere to the certification limitations of system suppliers.

Local fabricators are now forced to make fire tests in their own name, obtain independent third party certification and apply for Civil Defense approval independently. The fabricators also need to have their own qualified engineers, who must pass tests set out by the local Civil Defense authorities.

In contrast to many of our international competitors, both Forster & Schott have technical staff based in the UAE, and this ensures permanent support is available to all our fabricators.

In 2016, we partnered with White Aluminum to engage in a very aggressive fire test program, where we tested Forster & Schott systems in compliance with the UAE Civil Defence requirements. This testing program will continue every year, as we look to bring more and more systems to the UAE market.

In the UAE we have several local partners who we are working with, but we wanted to first use White Aluminum as the fire test benchmark from which other partners would follow.

What are the challenges to getting approvals?

There are many challenges associated with taking Civil Defense approval, not least selecting the systems to be tested and certified. Forster has tested thousands of systems all over the world, but it's financially impossible to re-test everything straight away. We had to select systems which we thought would be useful to the market and then convince our partners that this investment would pay off in the long term. We then had to decide on the test standards and test durations, followed by the selection of an approved international certification body, who could give us what we needed. It is very important that both the test lab and the certification body is approved by the UAE Civil Defense authorities, and a list of approved companies can be seen online.

When engaging in any fire test, there is always a cost to be considered; buying test materials, fabrication & installation, test & certification costs, it soon mounts up,

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and it is therefore important that all stakeholders are aware of what is happening and understand the importance of getting things right the first time. Failures can be expensive, but anyone who knows anything about fire testing will tell you, that occasionally failures are inevitable. In Forster, we always test to the point of failure, as we want to make sure our systems are not over-engineered and we want to learn something from every fire test. It's not that difficult to pass a fire test, but pushing the boundaries of what is possible drives us forward and we like to test things that others have not yet done.

So far we have carried out 15 fire tests with White Aluminium, and we have nine systems approved in both Abu Dhabi and Dubai, more will follow very soon.

To cover the market requirements, we test our systems to a variety of international standards including UL10c (doors), UL263 (partitions/facades), ASTM E119 (partitions), EN1364-1 & EN1634-1.

What advice can you give to minimize time and cost for gaining approval?

To minimize the time and costs associated with obtaining Civil Defence Approval, I would suggest the following;

- Know your market and select the right systems to be tested. Many companies test on a project by project basis, whereby they win a project and then engage in the fire tests after they sign the contract. This has the benefit of giving you an immediate return on your investment, but should the system fail the fire test, you could face problems explaining this failure to your client.

- Select the best test lab and certification body is also important. We chose TBW and Intertek because TBW are local and Intertek can certify to both the North American and European standards, and this was important to us.

And finally,

- Make sure you work with experienced companies or employ experienced professionals, in fire testing you only get one chance, a failed test means you have to start from scratch.

How are you going to use these ratings now with the new position you are now in?

We can now get specified by architects and consultants for the rated systems and use it on upcoming projects in Dubai.