Press Release
January 18th 2018

Vector Foiltec a finalist for rail industry awards

Vector Foiltec has made the shortlist at the UK Rail Industry Awards 2018. The company has been shortlisted in the Subcontractor of the Year category – with its Project Carlisle Station.

Carlisle Station, built in 1847, is a Grade II listed building which had a glass roof that had deteriorated into a fragile condition. This posed the risk of glass falling onto the public and station operational areas below. The repair of the roof was categorised as emergency works.

The preservation of the building required a sensitive solution that would restore the station as close to the original design as possible, while continuously functioning as a major transport link for generations to come. Part of that solution was to reduce the forces imposed on the original structure by the heavy glass roof by replacing it with a lightweight Texlon® ETFE system from Vector Foiltec.

The 10,500 m2 single-layer Texlon® EFTE foil system installed at Carlisle Citadel Station is formed of 10 metre by 5 metre extruded ETFE sheets. Each has a thickness of just 250 microns. Each ETFE sheet is welded along its perimeter to form an edge that can be folded over a 'Keder' extrusion rod. The perimeter assembly enables a structural connection between the ETFE panel and the aluminium perimeter framing.

For the facade element of the building, vertical mullions spaced along the ETFE panels have concave surfaces onto which convex mullion caps are clamped, sandwiching the ETFE foil perimeter edge into place and thus further tensioning it.

The roof and facade were installed by ETFE specialists at Vector Foiltec, using a unique technique developed for tensioning the ETFE to resemble glass.

The design innovation aspects of this project were primarily focused on using the right form of ETFE to ensure the refurbished station ended up as physically and aesthetically close as possible to the original building design. Traditionally ETFE is not used to replicate glass, since it is already fabulous in its own form with its own benefits, but with this project it was different. The use of the engineered single-layer Texlon® ETFE for Carlisle Station ensured that the illusion of glass was retained to keep it as a Grade II listed building. It was important that natural daylight continued to enter the station in the same way as previously enabled by the original glass roof.

The new Texlon® ETFE roof will better withstand weathering, wind and snow. When combined with the transparency of the ETFE foil, the low maintenance requirements and the proven longevity and durability of the Texlon® ETFE system, this results in one of the smartest long term building solutions available today.

The team at Vector Foiltec hope the transformation of Carlisle station will result in a prize at The UK Rail Industry Awards ceremony on March 22nd 2018, at the Battersea Evolution in London.

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