



STRAMIT BUILDING PRODUCTS

THE INVOLVEMENT OF STRAMIT BUILDING PRODUCTS with the Gold Coast Convention & Exhibition Centre provides an excellent example of how far steel roofing construction has progressed recently. Stramit, in conjunction with the architects and roofing contractor, brought to the project a level of innovation and flexibility that is hard to match.

The design of the roof demonstrates the extraordinary flexibility of steel roofing in creating the sweeping curves of the iconic structure, which is certain to become as well known as the many entertainers who will perform inside.

Behind the smooth and simple lines of the roof are many hours of careful planning to ensure the architects' vision was realised, while delivering a functional roof with a long and maintenance-free life. During these early stages, a wind tunnel model was employed to aid in designing the most efficient structure possible. Testing of the model allowed calculation of down-force and uplift to establish the optimum spacing for the purlins.

Stramit was involved from the design phase because the fine curves of the roof depended on very accurate fabrication and erection of the cold-rolled metal roofing products. Spring curving of the roofing across the purlins gave the designers the freedom to achieve very complex geometrical forms. Stramit Speed Deck Ultra® roof decking was specified to avoid the complication of on-site rolling of extra-long lengths, with the aesthetic advantage of a concealed roof fixing system. Stramit's involvement in the design process negated the need for tapered sheets and resulted in significant economies and on-site efficiency gains.

Because of the building's proximity to the ocean, the Stramit Speed Deck Ultra® decking was rolled from Colorbond Ultra coated steel, which includes special corrosion-resistant coatings that ensure the longevity and low maintenance of the roofing.

A light colour was chosen for the roofing, to reduce solar gain on the building, and four-metre eaves were incorporated to reduce solar penetration of the nine-metre high glazing. The composite roof and ceiling system is an integral part of the overall passive environmental design of the structure, creating high thermal resistance and complying with the breakout noise limits stipulated in an environmental impact study.

The unconventional roof form was fundamental to achieving the iconic structure envisaged by the architects, while the innovations involved in creating the reality are an indication of the expertise of Stramit Building Products as well as the design flexibility of steel.



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