

Case Study

Manuele Engineers Facade



Background

Here is a project that combines the complemented aesthetics of hot dip galvanized steel with a painted frame. The metallic nature of the galvanized steel contrasts well against the dark gloss painted RHS frame. The durability and maintenance free nature of hot dip galvanizing on very complex and intricate fabrications will continue to enhance the surrounding environment long into the future by preventing unsightly rust staining.

The project incorporates approximately 2,500m² of office and amenities space over two levels alongside a 16,000m² factory. The office mass was reduced by the extensive use of glass and operable patterned steel screens. Member sizes and spans, connection details and surface finishes were all thoroughly analysed to minimise upfront cost, ease fabrication and erection, reduce waste and extend useful life with little maintenance.

Being just three kilometres from the coast, a multiple coat system of polysiloxane was specified for the diagonal grid frame of the screens. All other external elements were hot-dip galvanized which has led the

project to be Highly Commended at the prestigious Intergalva 2012 Awards. All connections were bolted and there was no site welding. Member sizes and spans, connection details, penetration locations and surface finishes were all determined prior to tendering.

Hot Dip Galvanizing

Manuele Engineers had previously used hot dip galvanizing with success on the steel facade of their Clovelly Park SA office and wanted to make a similar, but more prominent, statement about the business they are in by highlighting the intricate steel fabrication, enhanced by contrasting hot dip galvanized in-fill panels against a painted RHS support frame.



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required close attention to the method of fabrication, as well as dipping technique during the hot dip galvanizing process.

The critical nature of this project highlights the need for early collaboration between the stakeholders; from the architect to fabricator to hot dip galvanizers. Teamwork again was the key.



As an architectural feature of the steel facade, it was imperative the finish was consistent, requiring selection of domestic equivalent steel chemistry from the same steel supplier. With a “meccano” type construction of the facade required in order to bring the various components together, very tight tolerances were involved. This was reduced to several millimetres to accommodate a number of the in-fill panels, which can be hydraulically rotated. This, of course,

1. No hold ups due to weather – steel can be galvanized in any weather conditions
2. Speed – modular design compatibility to speed up construction
3. Tough coating system – reduces transport damage & minimises on-site repairs
4. Inbuilt durability – minimises in-service damage in the manufacturing environment
5. Withstands UV – the surface is immune to damage from the extreme Australian sun
6. Superior corrosion protection – provides initial and lifetime cost savings
7. Aesthetics – natural good looks
8. Sustainable – Zinc and steel are 100% recyclable

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Awards

Winner: ASI Steel Clad Structures South Australian Steel Design Awards 2012

Highly Commended: GAA Sorel Award 2011

Highly Commended: Intergalva International Galvanizing Awards Paris 2012

Acknowledgements

Architect: Allen Giordano & Associates

Structural Engineer: Wallbridge & Gilbert

Building Contractor: Pike Constructions

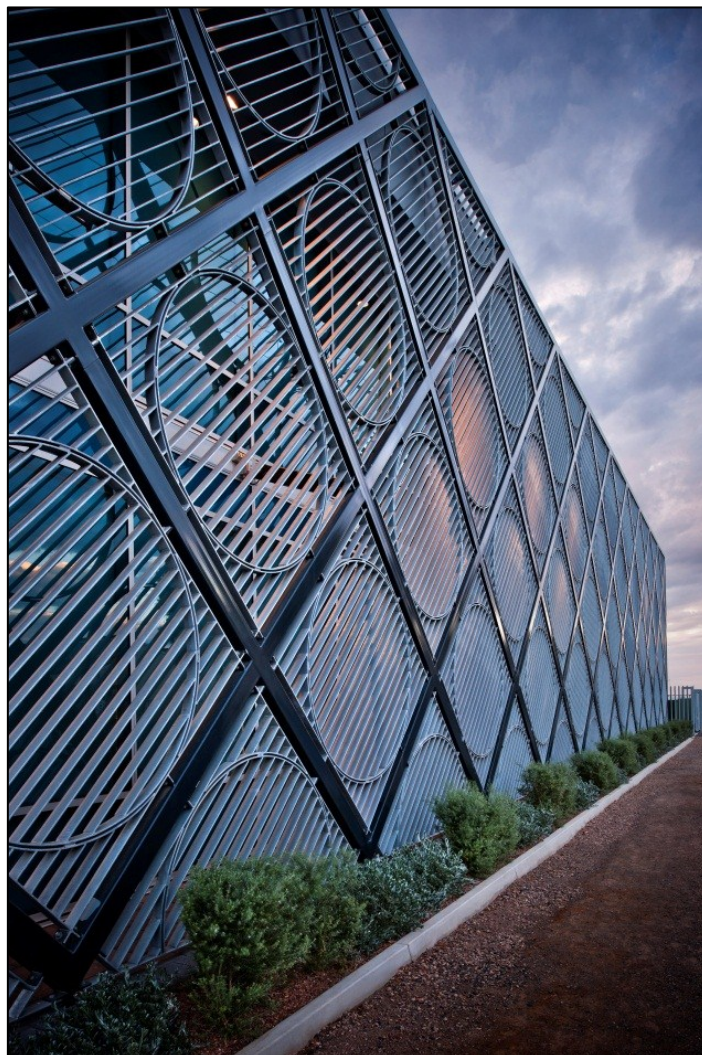
Steel Fabricator: Manuele Engineers

Galvanizer: Korvest Galvanisers

Additional Text: ASI (Alan Marshall)



Highly Commended



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Hot Dip Galvanizing **Tried. Tested. Proven.** **Your first and last line of defence**

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