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Case Study 14

BHP Wind Fence Project

How Australia's Largest Wind Fence is protected from corrosion with coatings applied by Ferro-Clean!

The Project

In 2024, BHP completed the Nelson Point Wind Fence — part of its $300 million Pilbara Air Quality Program. Built in three sections on the western side of BHP's Finucane Island port, the 31-metre-high fence uses structurally supported mesh panels to reduce wind speeds and, in turn, minimise dust lift-off from BHP's massive iron ore stockpiles.
At over two kilometres long and 24-31m high, this colossal structure is the first of its kind in Australia. Because the Pilbara is cyclone-prone, the wind fence is rated to withstand extreme wind speeds, with mesh curtains that automatically release under cyclonic conditions.

The Challenge

The steel structure of the BHP Wind Fence comprises 169 main columns fabricated from steel pipe up to 31 metres long. Hundreds of large-diameter steel tubes are also used for bracing and support, connecting the columns, holding the mesh panels, and providing diagonal reinforcement to prevent movement or tilting.
The fence is divided into three sections: Fence A (816 m) and Fence B (358 m), located at Finucane Island, and Fence C (828 m) at Nelson Point. Because the structure is in a cyclone-prone area and located close to the ocean in a C5 'Marine' environment, corrosion protection is critical.

The Solution

Ferro-Clean applied more than 36,000 litres of protective coatings to the 3,000 tonnes of structural steelwork for the project. The oversized items (the 169 main columns) were coated at Ferro-Clean's Office Road facility in Kwinana.
To paint items 31m long and weighing over 18T, the Kwinana facility's large blast rooms and 10,000 m² of painting space were essential in enabling smooth workflow and consistent throughput. Bracing members and support steel were processed at the Maddington facility, allowing a significant volume of steel to be completed quickly to meet project timelines, despite rigorous third-party inspection!

Photos courtesy of BHP.

We look forward to helping you with your next project!

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