STEEL POLE REPAIR & REJUVENATION

INDUSTRY	Electrical Transmission Utilities
CLIENT	Powercor
DISTRIBUTOR	Shield Crete Services Australia www.shieldcreteinternational.com.au
APPLICATOR	Powercor
PROJECT	Surface prep, welding on a compensation plate for strength restoration, application of ShieldPoly Polekote.
LOCATION	Various Locations, Victoria, Australia
SYSTEM	Surface prep and application of ShieldPoly Polekote to a minimum 0.7mm thick.
DATE	May 2018 - ongoing

GL Corrosion after less than 30 years average 6mm+ wall loss with some pits holed through.

Welding the strengthening on.

Description

Regular inspections by Powercor identified heavy corrosion around the ground line of the manufactured steel pole; 12.7mm plates between 9mm thick 100mm diameter pipe. CoEng.biz was engaged to assess the remaining strength, inspect the poles to the base plate connection some 1m below ground level, and prepare remediation recommendations.

It was assessed that approximately half the original strength remained. The pole is in a built-up area of South Yarra on the outskirts of Melbourne and supports an Underground to Overhead (UGOH) oil-filled cable. It would cost in the order of $3M to change the pole out. Hence, the decision was made to remove the corrosion, weld a steel strengthening plate over the corroded area, and re-coat the entire steel surface below ground and up to 200mm above ground.

Below ground the bitumen-based coating and galvanizing had lasted around 25 years before corrosion was initiated, so we are very confident that the castor based Polekote urethane will last more than another 20 years.

The Polekote product is hand applied and comes in pre-measured blister packs where mixing is done before the packs are opened. When opened, the Polekote is applied to the surface and brushed out with a thickness typically between 0.4mm and 0.7mm per coat (in this case it was closer to 1mm per coat).

In addition, we placed two coats around the ground line region with red blast tape in between the coats to act as an indicator for inspectors.