

Belzona Flexible Membrane Protects Concrete Tower Foundation

ID: 8658

Industry:

Application: WPA-Wall Problem Areas

Substrate: Concrete

Products: * Belzona 3111 Flexible Membrane ,
* Belzona 3911 PSC Surface Conditioner ,
* Belzona 9311 Flexible Membrane Reinforcing Sheet ,

Customer Location: Nova Scotia, Canada

Application Date: October 2020

Problem

This concrete foundation for a large electrical transmission tower had several large cracks that were exposed to water ingress. General epoxy coatings were found to be too brittle and also prone to cracking to fully prevent water from getting into the foundation. Water entering through these cracks makes the foundation susceptible to freeze thaw damage, and contributes to rebar corrosion.



Photograph Descriptions

- * 1. Cleaned foundation. ,
- * 2. Foundation conditioned with Belzona 3911. ,
- * 3. Finished Belzona 3111 application. ,
- * 4. Membrane in good shape one year following application. ,

Application Situation

Application of Belzona 3111 membrane to prevent water ingress via foundation cracks.

Application Method

The coating application followed Belzona procedure WPA-1 for protecting and weatherproofing external surfaces. The foundation was first cleaned to remove all dirt and debris then conditioned with Belzona 3911. Once the Belzona 3911 dried, the Belzona 9311 reinforcement sheet was incorporated into the first coat of Belzona 3111. Once the first coat was adequately dry, the second coat of

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ISO 9001:2015
FS 695214
ISO 14001:2015
EMS 695213

Belzona products are
manufactured under an ISO
9000 Registered Quality
Management System.

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Belzona 3111 was applied.

Belzona Facts

Epoxy coatings have not performed well with the utility for the purpose of preventing water from getting into foundation cracks. The Belzona 3111 membrane was used as a trial for the benefit that the membrane will keep water out, and is flexible which means no cracking like an epoxy coating. The second coat of Belzona 3111 membrane was applied several hours before a Fall rain storm. The Belzona 3111 Membrane was unaffected by the rain, and continued to cure once the weather dried up. One year after the application and the membrane is still in good shape with water ponding on the top.

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