

Floating Dock Repair using Belzona 4141 Magma-Build

ID: 10346

Industry: Local Authorities & Municipalities

Application: WPA-Wall Problem Areas

Substrate: Concrete

Products: Belzona 4141 (Magma-Build), Belzona 4911 (Magma TX Conditioner)

Customer Location: Washington State

Application Date: August 2026

Problem

A section of concrete on the floating dock had deteriorated and broken away, exposing the underlying styrofoam flotation core and allowing it to escape into the surrounding water. The root cause of the deterioration was not determined, but the exposed foam began contaminating the area, creating an environmental concern that required prompt attention. Left unaddressed, the damage would have continued to spread, allowing further loss of flotation material and expanding the contaminated area.



Floating dock during surface preparation.



Steel mesh installed to provide backing for concrete rebuild.



Floating dock during application.



Finished application.

Application Situation

The City needed a fast, effective repair to stop the spreading contamination and return the dock to service without pulling the structure for a full section replacement. Belzona 4141 (Magma-Build) was selected over replacing the entire dock section because of its high build capability on vertical surfaces, allowing the damaged concrete profile to be rebuilt in place without the extensive downtime, labor for removal and reinstallation, or cost of fabricating a new section.

Application Method

The damaged concrete was cleaned and abraded using a Bristle Blaster to achieve a sound, mechanically profiled surface, and any cracks were v-grooved out to provide a solid key for the repair material. Expanded steel mesh was secured to the sound surrounding concrete to serve as a backstop for the rebuild. Belzona 4911 (Magma TX Conditioner) was applied to both the concrete and steel substrates to promote adhesion, followed immediately by Belzona 4141 (Magma-Build), which was built up in layers to match the original profile of the dock. All work was performed in accordance with Belzona's Instructions for Use (IFU's).

Belzona Facts

The high build capability of Belzona 4141 (Magma-Build) allowed the City to rebuild the damaged section in place on a vertical surface without the cost and downtime of a full dock section replacement.

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ISO 9001:2015

FS 695214

ISO 14001:2015

EMS 695213

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