

# CASE HISTORY

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## BBZ RESIN INJECTION SYSTEMS

<b>Project:</b>	<b>Logan International Airport International Gateway Terminal E-East Boston, MA</b>	<b>Engineer:</b>	<b>Heidlinger Associates</b>
<b>Owner:</b>	<b>Massachusetts Port Authority</b>	<b>GC:</b>	<b>Modern Continental International Gateway Office</b>
<b>Injection System:</b>	<b>Duroseal Inject</b>	<b>Completed:</b>	<b>April 2001</b>

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BBZ USA Inc. was asked to look at an area of the cellar of the new Terminal E of the International Gateway. The area had already been injected twice with polyurethane, but the leak had reappeared. A site survey led to the conclusion that the area could be sealed with Duroseal Inject.

**Duroseal Inject**, a solvent-free, water-soluble injection resin, was chosen for this particular repair. Due to its low viscosity and low flow resistance, **Duroseal Inject** is able to penetrate into even the smallest cracks and capillaries. These are areas where polyurethanes, with their higher viscosity, cannot penetrate.

**Duroseal Inject** also provides the added benefit that the cured resin swells on contact with liquids. Even if the cross section of the crack/joint changes at a later point, the seal made with **Duroseal Inject** remains stable. This ability to seal against liquids is a physical process therefore it is ageless and reversible. Polyurethanes on the other hand undergo a one time chemical process. If the area is not one hundred percent sealed the water can still find a way in.

Drilling was done at a 45° angle to the crack or joint until one-half of the wall thickness is reached. Drilling on alternating sides for the length of the crack to be injected. The injection material is introduced through a 1-component pump into the injection packer. Due to its low viscosity, **Duroseal Inject** is able to penetrate even the smallest of cracks where the polyurethane failed to reach.

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