

# Crack Repairs Made With Vacuum Technology Gets Deep At Dulles International Airport



Dulles International Airport

*Core Extractions Of Cracks  
Repaired In Newly Cast Taxiway  
Pads Are Confirmed To Extend Full  
Depth Of The Cast At 15"*

**TECVAC, Inc.**

*"Taking Quality To A New Level... Worldwide"*

Washington, DC — Hairline cracks have been repaired on newly cast concrete taxiways at Dulles International Airport. Using vacuum technology, the repairs were confirmed to achieve full depth status by core drilling at locations along the fracture line. The core extractions revealed repair resin materials at the bottom depth of the pads at 15".

Unlike convention epoxy pressure methods, vacuum repairs with a low molecular weight methyl methacrylate removes most of the barriers preventing deep penetration. After access ports are surface mounted along the mouth of the crack, the entire length of the fracture is sealed. Negative force is applied to the zone and the repair resin is allowed to flow. There are a number of advantages to this method, not the least of which is the natural ability of the method to fill dead end cracks. Since there is no pressure build up at the ends of the fracture zones, there is no possibility of extending the damage.

Examination of the extracted cores exposed the fineness of the fracture. At a depth of +-4", the crack was invisible to the naked eye. A 40x comparator was then used for examination. At full depth, the fracture's width was below 0.001". Yet, under power, repair resin was clearly visible to the engineers from Parsons Management Consultants.

In some cases, TECVAC, Inc. can now perform these structural repairs without the telltale grinding and marring caused from sealant removal along the crack line. Using its proprietary CleanSet<sup>tm</sup> Permeation Injection Process surfaces are left in pristine condition!

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