

April 26, 2024

Pool Pal USA
3438 E Lake Rd S
Palm Harbor, FL 34685

Dear Steve,

After months of deliberation on how to deal with cracks in our 30 year old pool that has been sitting empty for longer than desired, I have settled on Aqua Locks.

Although I am not a licensed engineer, I do have a degree in Systems Engineering from the U.S. Naval Academy at Annapolis, MD. This has come in handy many times over the years, and most recently in trying to assess the best possible options to fix our breached pool shell. After being dissatisfied with most every pool contractor and concrete company who came to assess my pool, most of whom simply wanted to hammer rebar staples along the cracks or demo it completely, I decided to spend some time reviewing everything available in the market. I was surprised to find out that there are really only 2 or 3 reasonably viable options available.

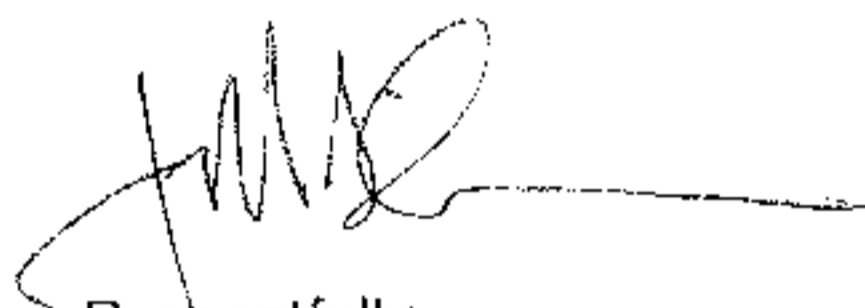
While one product clearly has the market covered from an advertising point of view, one really must study all aspects of a product, not just marketing, in order to assess the efficacy of a product's application. Most homeowners simply do not have the time or know-how to assess a product of this importance and will go with what looks and sounds best or what some "expert" tells them without having a fundamental design analysis of a product before deciding on a solution.

Here's why I think Aqua Locks stand out among the others. I hope this helps others out there who may be struggling with the situation I faced when dealing with our repair/remodel:

- ***Laterally adjustable dowel/pin***
 - In my opinion, the most important design feature of your product.
 - Allows the user some tolerance in not having to have the two pin holes drilled in precise locations, a feature that allows the user to avoid having to re-drill holes after finding they're not where intended.
 - Design directs the applied torque directly across and in-line with the staple and the two pins, resulting in the force between pins being applied directly perpendicular to the crack for maximum support.
 - This can not be done with an offset cam adjustment. Off-axis cam adjusters apply force from the cam to the staple plate in an angular fashion, thereby reducing the torque by as much as 50% depending on how well the staple is installed before being torqued. The resulting force applied to the pins against the shell is in an angular direction resulting in less compression support to the crack.

- **Torque adjustment bolt and adjacent pin are both secured to the staple plate**
 - This ensures the staple remains set in place. Not really more to say about this. It's important and your product does address the concern.
 - The offset cam staple design doesn't provide this stability and can result in the cam shifting/popping out while torquing, or worse, shifting after epoxy cure and the staple is patched with concrete. One end of the staple could "pop" loose.
- **Threaded dowels/pins**
 - Without this, regardless of epoxy cure status, the user stands the chance of the pins being forced out of the drilled holes during staple tensioning. Seems like a simple and inexpensive design aspect you included in your product in order to ensure your staple stays where intended.
- **Thicker steel**
 - While not necessarily a requirement, the thicker gauge steel provides additional strength to reinforce a crack that no homeowners want to address a second time.

Feel free to reach out any time. Always happy to help another DIY'er!



Respectfully,

Joe S.