

"Everyone knows concrete will crack. It's a fundamental law of civil engineering," says Barry Jackson, technical director of independent concrete repair firm Tradeways. It focuses on injection techniques as a way of solving problems to do with concrete ground stabilisation. Tradeways has nine projects in the UAE and Jackson forecasts that GCC concrete repair market to grow.

He said: "Our order book is pretty good - much better than last year, which says two things: one is that we are getting no more specialists in that area, and the other one is that the work is coming in."

Chris Hill, division manager of concrete repair and strengthening firm Structural, agrees with Jackson's assertion. "We're actively working on anything between six to 10 projects at a time depending on the size.

"Overall the market is coming around a bit. I think clients, consultants and contractors are all getting a bit more educated on it.

I think even up to a couple of years ago there was a mindset that if it's old and it's kind of worn down it's best to rip it down and rebuild; and now everybody's starting to repair those structures."

Mustapha El Hanash, regional manager of construction chemicals manufacturer PAC Technologies, says concrete repair is closely linked to new and old construction alike. "The concrete repair market is definitely growing and it is expected to grow more in the future and that is due to the fast development of the construction field and the big number of prestigious projects.

Add to this the number of projects that were put on hold for known reasons, which are taking off again now. You would expect that after four years of structures being left unfinished, that some kind of repairs are needed at the re-starting phase.

"In this regard, the range of repair materials that are offered by PAC Technologies are big and wide such as: high build repairs, high strength repairs including microsilica and fibers, special repairs with corrosion inhibitors for severe exposures, fairing coats, cosmetic repairs, colored repairs, epoxy and PU and crack injection products and techniques, pile head

treatment repairs, pourable repairs/micro concrete for column repairs, restoration repairs, water plugs, under water repairs.”

Jackson says the region’s harsh environment makes buildings more susceptible to corrosion and that a thorough analysis of the membrane failure is needed to provide a tailored concrete repair solution.

“You’ve got an aggressive environment. We are very close to the water, so we’ve got a very high water table,” he says.

“Injection techniques are usually used for structural repairs in concrete. The most common thing in this part of the world is the failure of waterproofing membranes in the basements of buildings or structures, and it’s usually below ground.

Injection techniques are used in those areas because it’s difficult to get at whatever it is you are trying to fix from the outside.

“We bring experience and a very wide knowledge of the type of materials and equipment that are out there to be used, so we have our clients, we have our projects.

We will look at a project and we will decide based on the particular circumstances the best material to use, the best equipment and the most suitable techniques.

It’s not just a question of selecting one material, one chemical and one pump; putting the things together and going to site. There’s an assessment to be done and then a repair strategy.

“Our speciality is that we pay a lot of attention to the root causes of a problem rather than just trying to cure it.

We bring an in depth analysis of the problem and talk with the client about what they want to achieve. Do they want a quick fix? Do they want a long-term a solution? And all these will contribute to our decision on how to do it with which materials.

And it’s reflected in the price as well. There’s always a cheap option. There’s always going to be someone who’s going to do a job much cheaper than what we do. But what they do won’t

be the same as what we do. We're very honest with our customers with what we can and can't do.

"When we do an injection repair job we do remind our clients that there is another step you should consider: cathodic protection."

Jackson adds that the concrete repair market in the UAE is estimated to be worth around \$50m and across the GCC the figure is around \$250m.

Hill says the bulk of Structural's work is on commercial buildings, and presently change-of-use projects are prevalent.

"A lot of the stuff recently has been new owners taking over buildings that have stopped construction and then they choose to change their use. So with that comes new load cases, new openings; going through and adjusting everything that's actually happening in the structure.

"If it's a strengthening project, essentially one of those change-of-use projects it would be nice to get brought in a little bit after the consultant. They've identified the problem and now you need to work up a solution. On more standard concrete repairs - hand patches - it can be through the consultant or direct to the client.

"The only one that really matters to us if it's going to be a strengthening or change-of-use project is making sure you're getting the right idea across when everyone is coming up with the idea. It's a lot easier to do that than develop an idea, come to site and realise the idea is not going to work the way you want it to."

Hill says that on about 50% of strengthening projects the firm is brought in just after the consultant, and on the remainder a design concept will already be in place. Of that remainder he says about 25% of the concepts are fine and the firm can just carry out its work, but the other 25% usually require a complete rethink.

El Hanash says: "There are many big and prestigious projects in the GCC and especially in UAE, so concrete repair firms have to comply with the requirements and the high level of specifications in such projects by keeping the contractors satisfied commercially.

“Generally the volume of concrete repair work in GCC is good and this has resulted from the decision of the clients to improve their projects, and also not forgetting the big investment done by the manufacturer in term of improving the quality of the concrete repair products and developing new products matching the big projects requirements.

“Another important factor is the new requirement of colored repairs to match certain requirements of some big projects especially villas, where a tailor made solution means big savings for the contractors in terms of time and manpower.”

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