

Diamond Products' Wire Is A Cut Above The Rest

State-of-the-art diamond technology recently launched in the South African market enables a thin piece of diamond wire to cut through large concrete structures like a hot knife through butter.

Heavily-reinforced concrete structures can be more neatly and accurately cut with a new range of reinforced diamond wire launched by Diamond Products - which specialises in the manufacture, assembly and sales of diamond tools and equipment for industrial applications.

The revolutionary new Razor reinforced diamond wire makes use of unique diamond-beading technology, which enables the user to cut up to 4 m² of heavily-reinforced concrete per hour by using a closed-loop system attached to a hydraulic wire saw, which runs at approximately 28-m-per-second.

Diamond Products director Brian Clark points out that the secret to the state-of-the-art technology is in the highly-durable beads, which are designed in South Africa using a unique metal-matrix system, whereby the diamonds are mixed with metal powders before being sintered.

"The reinforced diamond wire is made up of a flexible 5 mm multi-strand steel cable that is covered with 40 diamond-impregnated beads per meter. The beads are produced using a secret formula, which ensures that they cut faster and last far longer than any other on the market," he explains.

"A high-strength rubber is then added to form a strong and flexible coating around the cable that holds the beads firmly in place, ultimately resulting in a highly-durable product that is faster and more reliable than any other cutting wire available in South Africa."

Holmes Concrete Sawing and Drilling, a precision concrete cutting and core drilling company, has applied Diamond Products' range of reinforced diamond wire to a number of large projects nationwide.

Holmes Concrete Sawing and Drilling managing director Andrew Holmes notes that diamond wire is a far better alternative to concrete saw blades or percussion tools when working with reinforced concrete.

"The biggest advantage of the wire is that it cuts faster, deeper and more accurately than concrete blades, which have a maximum reach of just 600 mm," he explains.

"This has enabled us to undertake a number of large projects which would not have been possible previously. These include; bridge renovations as part of the freeway upgrades, work on the Gautrain project and at Durban harbour."

Holmes Concrete Sawing and Drilling was established in 1993, and currently employs 50 staff members at branches in Gauteng and Kwa-Zulu Natal.

The company provides specialised concrete cutting services to the industrial, transport and infrastructure sectors of Southern Africa, and has been doing business with Diamond Products for the past 17 years.

Although diamond wire technology has been available in the South African construction sector for the past decade, Clark notes that contractors have only recently discovered the advantages of the product.

"It has been a challenge to change the mindset of the industry in general; however, as diamond wire has become more affordable and readily-available, contractors have begun to realise the benefits that the product offers over traditional and industry-standard tools," he says.

Clark notes that diamond wire is suitable to any industrial application that requires the removal of bulk, reinforced concrete from a structure. He points out that diamond wire has become known in the industry as a way of performing 'concrete surgery' - owing to the fact that the cut is 100 per cent accurate and vibration-free, meaning that no other part of the structure will be negatively-affected during the cutting process.