

Diamond Products and QA Coring bridge the gap in roads upgrade

Innovative concrete coring, sawing and scanning expert, QA Coring, has become the first company in South Africa to successfully drill through three concrete bridges with such accuracy that they can now be linked together by contractors using reinforcing steel bars.

The five-week project, part of the Gauteng Freeway Improvement Project (GFIP), was completed by QA Coring in August 2011 and involved drilling 560 holes – each 32 mm in diameter and 2 m deep – into the bridges along the Rietfontein Interchange where the R21 and N12 freeways cross.

QA Coring MD, Henry Dippenaar, believes that the company was able to complete the project on time and within budget by making use of custom-designed core barrels supplied by Diamond Products – a leading specialist in the manufacture, assembly and sale of diamond tools and equipment for industrial applications.

“As the first company in the country to attempt a project of this nature, it was essential for QA Coring to be provided with the highest-quality equipment from a reliable supplier. As satisfied Diamond Products customers for over eight years, we did not hesitate in contacting them for assistance in meeting this unique challenge,” Dippenaar explains.

Due to the complexity of the project, which involved drilling the holes at angles between 23 and 30 degrees, QA Coring required a range of barrels measuring up to 3 m in length. Diamond Products director Darryl Gray says he supplied a total of 18 core barrels to QA Coring, in a variety of lengths ranging between 450 mm and 3 metres.

“The custom-built core barrels consisted of 41-mm-diameter bits fitted with RC 70 diamond segments, which enabled the barrels to drill neatly through the reinforced concrete. The core barrels were used in conjunction with Hilti DC 350 and DC 200 electric diamond core drilling machines,” he explains.

Dippenaar says that QA Coring accurately drilled the



Accurate collaring of the 41-mm bit was crucial.



Entry-angle drilling operation.



Three drilling machines running 2,4-m-long, 41-mm barrels.

required number of holes without any major setbacks. These holes will ultimately enable the contractor to link the bridges by splicing the reinforcing steel, providing increased strength to evenly distribute the weight of the vehicles that will be moving over the bridge.

Dippenaar admits that the unusual drilling angle increased the amount of wear on the core barrels. “However,” he continues, “Diamond Products remained committed to replacing and re-tipping the diamond segments regularly throughout the project.

“During the drilling process, we had to use the deck of the bridge to anchor the drill, and then swing the drill stand to get it to the required angle of between 23 and 30 degrees. Diamond Products provided us with unrivalled after-sales support during this process, and experts from the company were available whenever we needed them. What’s more, the quality of the Diamond Products core barrels proved to be far more

durable and reliable than any other products available in the local market,” he continues.

Parys-based QA Coring employs 22 staff members, and has specialised in concrete coring, sawing and scanning projects nationwide since 2001. Dippenaar believes that, following the successful completion of this high-profile project, there is considerable room for growth for the company.

“With Diamond Products’ assistance and expertise, QA Coring has proven its ability to provide a viable solution and meet any challenge related to a client’s project – no matter how complex. As infrastructural investment steadily increases, I am confident that QA Coring can gain substantial market share through constant innovation, paired with industry expertise and experience,” Dippenaar concludes. ■

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