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# NO STRINGS ATTACHED



Sefiani Enterprises is one of Morocco's leading firms in public works and civil engineering. Its core expertise lies in transport infrastructure, and Sefiani has been offering customers technical solutions in asphalt and paving construction for more than 70 years throughout the country.



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Recently, Sefiani began working on the high-speed rail line between Tangier to Kénitra, known as the LGV. With trains expected to travel a top speed of 320 kilometres per hour on the new line, it is important that paving quality be perfect. Customers therefore set this as an important condition for Sefiani to fulfil along with reducing operating costs. With these requirements in mind, Sefiani began using the Leica PaveSmart 3D Machine Control system on its asphalt paver.

"It is the first Leica PaveSmart 3D system we sold for an asphalt paving application in Morocco," proudly states Slim Meslameni, Leica Geosystems' North Africa sales manager. "Our customer informed us that the project's set targets were easily achieved, using the Leica Geosystems Machine Control solutions. Without a doubt, we have now set a new quality standard in the local paving market."

#### EXCELLENCE IN TRAINING

Leica Geosystems' paving application expert, Michalis Karizonis, was asked to train the Operating Asphalt Team at Sefiani Enterprises, concentrating on specific project needs. For an entire week, the team focused on the three important performance pillars: quality, quantity and simplicity.

Training began with an explanation of the individual hardware components followed by mounting procedures and settings for the asphalt paver equipment. In this case, the paver used was a Vögele Super 1800-2, which was adapted with the Mobamatic 1 levelling system. Using Plug & Play, the Leica PaveSmart 3D was quickly and easily connected to the Mobamatic asphalt paver. Almost all concrete slip form machines, asphalt finishers

and milling machines from industry-leading paving manufacturers, such as Bomag, Dynapac, ABG and Vögele, are supported and work seamlessly with Leica Geosystems' 3D Machine Control technology.

"The interchangeability from one paving brand to another helps to utilise customers' machinery fleet nearly 100 per cent," said Rainer Bippen, business development manager at Leica Geosystems. "The cost savings are tremendous for construction companies. Practically any paver can be upgraded to run with the Leica PaveSmart 3D. With the software's high accuracy performance and the improved concrete yield due to its precise grade control, the Leica Geosystems 3D Machine Control solution gives us major savings in a project's life cycle calculations."

On the second day, the training had already reached the asphalt performing level, which means the team was ready to pave the asphalt road "stringless." While paving the first few metres, the surveying experts from Sefiani made quick as-built checks to compare the paving results with the project design. Surveyors measured the overall deviation at 3mm. The requirements of the contract were set at 15mm. The Leica PaveSmart 3D system, however, improved deviation by 12mm, which is enormous in the road construction industry. Setting new quality standards in Morocco had been achieved.

"The daily goal of the project was to pave 8,000m<sup>2</sup> of asphalt road. With the improvement of 12mm thickness, this resulted in a best case cost savings of around 15,000 Euros per day on the project. Within a very short period of time, the investment was easily



covered,” said Tarik Elasri, support manager at Leica Geosystems’ representative Marcotec. In addition, stakeout, surveying and time costs had been saved due to no longer using string lines as part of the project. Staking out with strings would normally cost the project an additional 1,000 Euros per km length. On this 32km project section, Sefiani figured it saved another 32,000 Euros for the customer by replacing the string lines with 3D machine control.

#### **SUPERIORITY IN SERVICE**

Mohamad Errarray, leading Sefiani Enterprises, has another view on the improved accuracy and cost performance achieved. In the coming years, many infrastructure projects with high requirements will be released by the Morocco Ministry of Infrastructure, such as high-speed railways, airports, highways and harbour projects. Demands of these projects will focus on achieving the highest accuracy possible in order to ensure safe usage and also the longest life cycle possible for government investments.

“The current performance of Leica PaveSmart 3D sets standards for future tenders, which can no longer be achieved using the old paving process. Leica Geosystems 3D Machine Control makes such accuracy possible and Sefiani is ahead of the game,” said Errarray.

Due to the outstanding performance of construction machines using Leica Geosystems 3D Machine Control systems, Marcotec has become the largest dealer for 3D construction solutions in Morocco. Another advantage Marcotec offers customers is service. “We guarantee Leica Geosystems Machine Control will be working within six hours on the machine anywhere in Morocco. We are also able to deliver missing parts from our service shop within 12 hours,” states Fahd Benomar, general manager at Marcotec.

This is certainly a strong argument for construction companies who depend on performing machines on site and certainly one that is now easily achievable.

