

CONSTRUCTION INSIGHT

The Construction Segment Newsletter

Machine Control Systems in Spain

In December 2000 the first Machine Control System for Graders from Leica Geosystems was installed in Spain. The second system followed in early 2002. The owner of both systems is the company "Auxiliar de Obras S.I." who uses their graders to trim the previously spread layer of recycled material highly accurately. For this process the subgrade is mixed with cement and additional materials to create a high stable surface.

As this is the last layer below the finishing asphalt or cement, an accuracy of ± 5 mm and a smooth surface is required. The machine control systems from Leica Geosystems are used at several big highway constructions close to Madrid, the capital of Spain,



Leica Machine Control System for Graders on a Hanomag Grader with Wirtgen Recycler in front

like the M-511, M-501, Radial-V and the Radial-II. Every motorway is about 20 kilometers in length and has between two and eight lanes. The importance of these highways leads to an enormous time pressure, since they will be the key connections between

Madrid and the rest of Spain. The growing traffic will be removed from the old motorways so that the new ones can support

Leica
Geosystems

Machine Control Systems in Spain (Continued)



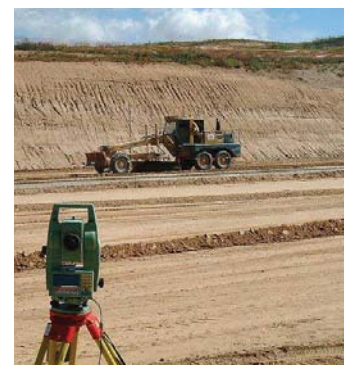
Leica System in use doing the final trim of stabilised material

a higher density of traffic. Rogelio Velasco is the owner of Auxiliar de Obras S.I. When asked why they are using Leica Machine Control Systems for Graders, he replied: "We have to hand over our work with an excellent accuracy of the height of the roads and have needed a system which can cover all our demands. The Leica systems provide us with more than enough, especially because the stabilised material allows us only a short time of processing before it starts to dry. With this system we can do it faster and save a lot of time and costs. In addition we can use the Leica systems to check the height and position of the material before we start grading.

The profit of the system depends of the performance of the grader. We finish the job in approximately 30% less time. The overall cost savings are about 25% because it's not necessary to

have a couple of surveyors permanently on site. Many times we get inquiries from most of our clients asking us for the control system for graders because the profits are obvious for everybody. It's evident that this is the future of machine operation on construction sites. One of the advantages of machine automation without string-lines is that the surface of the road done by the grader is regular and homogeneous, even on curved surfaces between the stakes." When asked about support from Leica Geosystems, Mr. Velasco said: "Yes, because Leica is always developing their products and we get the latest software versions. The use of the system is very easy and the driver could operate the machine PC computer in less than one hour. If we have some question we can always ask the technical support at Madrid or Barcelona, and they always find the best solution."

Leica Geosystems offers special thanks to Mr. Valesco for contributing to yet another construction success story. When productivity and performance gains are achieved like in this story, everyone gains – from the contractor to the tourist who will travel these roads in the near future.



A Leica total station TCA1103 providing 3D coordinates by permanently tracking to the machine prism