The efficiency of the technology measuring processes from Hexagon Manufacturing Intelligence, their technical training and proven effectiveness in the field of support, become available for Topographic and Geographic Engineering through projects from Geotrilho, a powerful Portuguese company located in Barreiro, a few kilometres from Lisbon (Portugal). Geotrilho provides services in various areas of the civil construction sector and public works projects, and combines the Leica Absolute Tracker AT402 and Leica B-Probe systems to carry out precision surveys.

- The combination of the Leica Absolute Tracker AT402 and the Leica B-Probe systems offers a practical scanning system, completely portable and capable of measuring extra-large volumes.
- Geotrilho professionals have received complete training from Hexagon Manufacturing Intelligence technicians, as well as further follow-up and consultancy services.

- The Portuguese Topographic Engineering giant relies on Hexagon Manufacturing Intelligence technology to increase its customer base and turnover.

**Geotrilho: Specialists in Large Engineering Projects**

Since its creation in 2001, Geotrilho has worked primarily on Topographic and Geographic Engineering, but has also specialised in Bathymetry, Cartography, Inspection and Remote Sensing in the Laser Scan and Photogrammetry sectors.

After its initial beginnings in the Portuguese market, in 2007 the company experienced a rapid growth in other markets and has different projects running in Spain, Algeria, Angola, Ghana, Mozambique and Macao, and is currently completing new proceedings for mining projects in Cuba.

The effectiveness, efficiency, accuracy and versatility of the services offered by Geotrilho have enabled the robust growth of its global position, completely matching the values of Hexagon Manufacturing Intelligence and the measuring services and systems it offers to its customers.

Likewise, the training and systems supplied by Hexagon Manufacturing Intelligence have worked and still work, hand-in-hand, with Geotrilho in measuring all types of existing facilities and structures in industrial areas, mainly in the mining and metallurgy industries.

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**Leica Absolute Tracker AT402 and Leica B-Probe, a Combination of Flexible and Accurate Measuring**

Since 2014, Geotrilho has been using the Leica Absolute Tracker AT402 and Leica B-Probe systems combined with the PC-DMIS 2014 software, providing excellent results. This is explained by Gonçalo Inocentes, General Manager of Geotrilho: ‘We perform dimensional measurement with the systems and equipment supplied daily by Hexagon Manufacturing Intelligence, measuring all types of existing facilities and structures in industrial areas, mainly in the mining and metallurgy industries. We work with tolerance levels from 0.01mm to 1mm.’

The adaptation and learning phase for Leica AT402 users has been very efficient, ‘In addition, these systems are very easy to transport to surroundings that are not always ideally located, they are very flexible and, above all, are very easy to use, allowing us to do our job as quickly and efficiently as possible and to obtain accurate results to meet our customers’ requirements.’

Engineer Gonçalo Inocentes explains how using the systems and the technical training provided by Hexagon Manufacturing Intelligence allows Geotrilho to set ambitious growth projects: ‘With Leica technology from Hexagon we are expanding our customer base and taking advantage of new business opportunities, since we have increased in versatility, speed and accuracy. Now we can ensure dimensional control with different dimensions and achieve accuracy levels that were unthinkable before acquiring this equipment, allowing us to measure accurately to the hundredth of a millimetre.'
Geotrilho and Hexagon Manufacturing Intelligence, a Winning Alliance

Once again, Hexagon Manufacturing Intelligence has provided a customer with the project and systems that fit their needs perfectly, keeping Geotrilho’s commitment to a complete control of its processes, and maintaining Hexagon Manufacturing Intelligence’s philosophy of lending their unconditional support to their customers so that they may take a step forward in a constantly evolving world in each one of their sectors.

All this is complemented with the support service offered by Hexagon Manufacturing Intelligence Iberia, a service that goes beyond product offers, since their experts are available to their customers for training, consultancy, parts programming, inspection contracts and system reconstructions.

On behalf of Geotrilho, Gonçalo Inocentes positively values the work carried out with Hexagon Manufacturing Intelligence: ‘We are very satisfied with the products and services supplied by Hexagon Manufacturing Intelligence and we will use them again for our future projects whenever necessary. From the beginning, the service given by their technicians was very effective and the training received by three of our technicians specialised in measurement was very effective, given that they could operate the systems with accuracy from the very first moment.’

Dimensional Control of a Cold Rolling Mill

In this case, Geotrilho was faced with ensuring dimensional control of a large scale installation, a cold rolling mill, since this measurement needed to be carried out in a harsh workshop environment. The components of the cold rolling mill to measure were: the carriageway, uprights, winders and bearings.

With the combination of the Leica Absolute Tracker AT402 and the Leica B-Probe sensor, they performed the controls for:

- Parallelism of the uprights faces (Operator and Motor);
- Parallelism of the transport carriageway.
- Perpendicularity of the main centreline with the centrelines of the carriageway, input winder and output winder;
- Verification of the positioning of the winders with the support arm.

For specific dimensional control of the upper and lower bearings, the client required the measurement and verification of parallelism, angularity, distance, flatness, coaxiality and concentricity.
Hexagon Manufacturing Intelligence helps industrial manufacturers develop the disruptive technologies of today and the life-changing products of tomorrow. As a leading metrology and manufacturing solution specialist, our expertise in sensing, thinking and acting – the collection, analysis and active use of measurement data – gives our customers the confidence to increase production speed and accelerate productivity while enhancing product quality.

Through a network of local service centres, production facilities and commercial operations across five continents, we are shaping smart change in manufacturing to build a world where quality drives productivity. For more information, visit HexagonMI.com.

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