Prosistemas will integrate optical fibre sensors into the flooring to anticipate future pathologies

Developed with the Aimen technology centre, the system recognizes in real time the smallest changes -temperature, humidity and deformation- altering the optimum setting of concrete

This pioneering system will allow the extension of our flooring's resistance and High Planimetry qualities, involving enormous long-term savings for Prosistemas customers

Vigo, 8th November.- When we say that our flooring is technological, we do so because we are willing to use the latest developments in the sector to make the best industrial floors in the world. And if those developments have not been achieved yet, we take the lead and pioneer this extremely demanding market. Our engineers, in cooperation with the Aimen technology centre, have been working in a state-of-the-art system to test and monitor, in real time, the concrete setting process.

Using a complex network of ultrafine optical fibre sensors, just one milimitre thick, which are integrated into the flooring, all the information connected with the changes of temperature, humidity and deformation -key to monitor the perfect setting- is collected and transmitted. This valuable information makes it possible to anticipate the emergence of pathologies damaging the flooring, including warping, retractions or future cracks which, in addition to impacting the service life of the flooring and the vehicular traffic it will endure (vertical storage), also exert an influence on the final High Planimetry results, an element in which our company is a global benchmark. In other words, our clients will save hundreds of thousands of Euros in servicing over the next several years.

A further advantage of this FBG type optical fibre sensor system relates to the fact that the data collection network can be extended and occupy a flooring of any dimension and send information online from anywhere. This is extremely important bearing in mind that, so far, tests had to be carried out occasionally, one by one, in a particular location. We must also take into account that Prosistemas makes some of the largest floorings in Europe, with areas, at times, of more than 100,000 square metres.

The new sensor system will be part of the several quality control systems which are the hallmark of prestige of Prosistemas, in addition to the measuring equipment of the surface levelling for which our company has received several Golden Trowel awards. This research project between Prosistemas and the Aimen technology centre is part of the “Programa Innova Peme” (Innovating SMEs Programme) and is supported by the Regional Ministry of Economy and Industry of the Autonomous Government of Galicia and has a grant from the Axencia Galega de Innovación (Galician Innovation Agency of the Autonomous Government of Galicia, Xunta de Galicia). It is co-financed by the European Regional Development Fund (ERDF), as part of the 2014-2020 five-year ERDF plan.