

More smart plastics intelligence for greater plant availability

Live on the igus stand at the Hannover Messe: Monitor the operating state of all e-chains with just one module

Predictive maintenance is part of Industry 4.0 and the factory of tomorrow. For this future, igus has developed a family of products under the heading of 'isense', where different sensors and monitoring modules make the plastic solutions intelligent. In Hall 17 at Hannover Messe 2017, igus will be showing new and improved products. These include, for example, isense EC.RC, a new system for monitoring e-chains, the optimised CF.Q module for the intelligent chainflex cables that customers are already using today and the intelligent iglidur PRT slewing ring bearings.

Making production processes easier and more reliable – In order to enable its customers to do this, igus the motion plastics specialist, develops intelligent solutions that warn of potential failure in good time before unplanned and very costly downtimes occur. One year ago, igus presented its first products in this area at Hannover Messe – Due to the considerable customer demand, visitors coming to the stand a year later can now experience the new generation of 'smart plastics'.

Continuous monitoring for safe operation

Including the new isense EC.RC (e-chain Run Control). It monitors the operating status of the e-chains, especially in guide troughs used on long travel applications. Sensors measure and check the position of the energy chain. In this way, the machine is prevented from continuing to operate when mechanical faults occur; meaning that total loss of the chain or an electrical shutdown (for example, due to cable damage) are a thing of the past. In this way the isense EC.RC, like all isense products from igus, guards against any unscheduled machine shutdowns.

Further intelligent motion plastics for diverse applications

Another new product from the smart plastics family is the EC.M module, which is mounted on the moving end of the chain and automatically records its status,

i.e. acceleration, speed, temperature and completed cycles. The distance travelled and the remaining service life of the system can be derived from this. igus has also improved the CF.Q module, with which the data of the intelligent chainflex cables are gathered. Due to continuous measurement of the electrical properties, ambient temperature and the number of cycles, a possible failure of the cable is predicted in good time. "Continuous testing in our test laboratory and in customer applications help us to make analysis of the measured values increasingly more precise", explains Michael Blaß, Head of Sales and Marketing e-chainsystems at igus. "Real applications in which we are already using our intelligent products and our chainflex cables include, for example, robot gantries for transportation in automobile factories, where even short unscheduled standstill times result in very large production losses."

One module for many energy chains and cables

Whereas igus presented different isense measuring systems for its linear guides, energy chains and cables last year, the icom communication module, which gathers, and transfers all the values of these systems, was improved at the same time and now communicates mostly without cables. It is even easier to integrate into existing production, one of the reasons being that only a single icom module is needed for several systems. In addition, customers can now connect other manufacturers' data-generating units which monitor status to the icom module. Live on the stand in Hall 17, igus will be showing how the operating states of all moving e-chains are measured by only a single icom module. In addition, igus will be showcasing the intelligent iglidur PRT slewing ring bearing, a new member of the smart plastics family. Thanks to an integrated wear sensor, which is mounted in a cut-out niche under the slide elements, the so-called PRT.W sensor ('W' for wear) also measures the abrasion so that replacement of the bearing in good time without an unscheduled machine shutdown can be ensured, thus contributing towards increased security in production.

In the next few weeks, you can also find all the news relating to igus at Hannover Messe 2017 on Facebook and Twitter under the hashtag #igusHM17

Captions:



Picture PM1817-1

The new isense EC.RC uses different sensors to carry out measurements and check that the energy chain is functioning correctly. A single communication module can monitor many e-chains and cables simultaneously. (Source: igus GmbH)

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ABOUT IGUS:

igus GmbH is a globally leading manufacturer of energy chain systems and polymer plain bearings. The Cologne-based family business has offices in 35 countries and employs around 2,950 people around the world. In 2015, igus generated a turnover of 552 million euros with motion plastics, plastic components for moving applications. igus operates the largest test laboratories and factories in its sector to offer customers quick turnaround times on innovative products and solutions tailored to their needs.

The terms "igus", "chainflex", "CFRIP", "conprotect", "CTD", "drylin", "dry-tech", "dryspin", "easy chain", "e-chain", "e-chain systems", "e-ketten", "e-kettensysteme", "e-skin", "energy chain", "energy chain systems", "flizz", "iglide", "iglidur", "igubal", "invis", "manus", "motion plastics", "pikchain", "readychain", "readycable", "speedigus", "triflex", "twisterchain", "plastics for longer life", "robolink", "xiros", "xirodur" und "vector" are protected by trademark laws in the Federal Republic of Germany and internationally, where applicable.