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PRESS RELEASE

WITTMANN BATTENFELD at the K 2016 WITTMANN BATTENFELD with new Industrie 4.0 CMS

WITTMANN BATTENFELD with new Industrie 4.0 CN module at the K 2016

Under the motto "be smart", WITTMANN BATTENFELD is presenting at the K 2016 in Düsseldorf its new condition monitoring system for calculable scheduling of condition-based maintenance from 19 to 26 October in hall 16, booth D22.

One of the highlights in the implementation of Industrie 4.0 strategy is the introduction of a condition monitoring system (CMS) under the aspect of "smart services" at this year's WITTMANN BATTENFELD K booth. This system will be demonstrated on a large machine from the *MacroPower* series, a *MacroPower* 1100, on which an air inlet component for the automotive sector will be manufactured using the CELLMOULD[®] structured foam process.

With the help of CMS, important machine data are measured by sensors, processed by a special process control software and subsequently analyzed via the new UNILOG B8 machine control system, at a customer's control center or directly at WITTMANN BATTENFELD. This makes calculable, condition-based maintenance possible.

As in Formula 1 racing, where the vehicle data are analyzed in every round, the condition monitoring system collects the machine data in every cycle. The data are saved for up to 12 months and used for analyses and evaluations.

CMS combines technology with human diagnostic competence. The condition of the machine's key components is monitored continuously with the aim of optimizing their availability and efficiency, keeping them on an optimal level and thus reducing the machine's life cycle costs.

In CMS, 3 virtual levels are linked with each other to form a decentrally structured system. On level 1, the measurement data are collected. Depending on the types of data, various sensors are used at each measuring point, which pass on the actual



values measured to the analysis systems. The data to be analyzed are vibrations, torques, temperatures, air humidity, oil quality, flow quantities, screw function and all data from the control cabinet.

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Data processing and analysis are carried out on level 2. The core of the CMS system, the evaluation unit with CPU and measurement module, transforms the latest measurement values into analysis variables.

On level 3, the evaluation of data and condition analysis take place. The assessment of information about the machine's condition and any decision proposals derived from it is the responsibility of duly qualified specialists, either at the customer's plant or, if desired by the customer, also at the WITTMANN BATTENFELD service center.

The condition-based maintenance schedule realized by CMS, which can be planned by the user, enables a reduction in overall maintenance costs with a simultaneous increase in machine availability.



Fig. 1: Overview CMS







Fig. 2: Close-up of oil data



Fig. 3: Close-up of injection unit data



Fig. 4: MacroPower 1100





The WITTMANN Group

The WITTMANN Group is a worldwide leader in the manufacturing of injection molding machines, robots and peripheral equipment for the plastics industry. Headquartered in Vienna/Austria, the WITTMANN Group consists of two main divisions, WITTMANN BATTENFELD and WITTMANN, which operate 9 production facilities in 6 countries, including 32 direct subsidiary offices located in all major plastics markets around the world.

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WITTMANN BATTENFELD focuses on independent market growth in the manufacturing of state-of-the art injection molding machines and process technology, providing a modern and comprehensive range of machinery in a modular design that meets the actual and future requirements of the plastic injection molding market.

WITTMANN's product range includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, mold temperature controllers and chillers. With this comprehensive range of peripheral equipment, WITTMANN can provide plastics processors with solutions that cover all production requirements, ranging from autonomous work cells to integrated plantwide systems.

The syndication of the WITTMANN Group has led to connectivity between all product lines, providing the advantage plastics processors have been looking for in terms of a seamless integration of injection molding machines, automation and auxiliary equipment – all occurring at a progressive rate.





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