Monitoring processes and supporting decision-making: management intelligence software for maximum yield and full control

Digital transformation in plastics production: managing process knowledge digitally and generating real added value

Surface inspection systems generate large volumes of data that contain all specific characteristics of a product: dimensions, material defects, defect types and quality level, recipe composition, and the date and time of inspection. When properly structured, combined with other process parameters and correctly analyzed, this information reveals much more than just the quality of the product concerned. The data collected enables an easy monitoring of process properties and tracking of sources of defects. Decision-makers at every level of the company receive all the information they need to make quick and objective decisions for each process step and thus to increase the efficiency and yield of entire production lines.

Connecting and analyzing data from different sources is becoming ever more important in plastic film production. Evaluating quality data for process monitoring and decision-making is an effective way to increasing production yield and efficiency sustainably. With a higher level software architecture, individual reports can be used to analyze and evaluate the entire manufacturing process. With its Enterprise PROduction Management Intelligence (EPROMI) system, ISRA VISION delivers the just right solution suite for this.
Processing and visualization in customized cockpits

The information on products and processes is aggregated, consolidated and structured in a central data warehouse. Any number of users can access the latest measuring data simultaneously. The data mining software offers transparent information and is crucial to the standardization of communication and information processes within a company. Important data is sorted, processed, analyzed and displayed in next to no time, for example in the form of charts and customized reports. EPROMI analyzes various production and quality data obtained from production, condenses information across processes and uses it to provide valuable information on defect types, defect causes and process shortcomings. Reports are displayed in cockpits. In addition to standardized templates, customized solutions can be adapted to the user's needs and requirements, even by the user. The software and the inspection hardware integrated into EPROMI generate valuable process knowledge. Data from other sources, such as product temperature or sheet thickness variations, can also be integrated.

Supporting decision-making processes at every level of the company

The database solution provides the relevant information with the right degree of detail for any requirement. Statistical defect rates and defect trends can be analyzed right at the line – on the shop floor – so that process problems can be identified promptly and eliminated before they result in high costs or rejection rates. At management level – on the top floor – the system supports yield management and decision-making by providing aggregated reports. Management-level decision-making processes are supported sustainably and valuable knowledge is generated to enable increases in yield. Because plastic film manu-
Manufacturers can rely on optimum, cost-efficient information on processes and products at all times, they can achieve maximum quality and optimize their production. At the same time, resources can be saved.

The digital and communication-based transformation of industry — known as “Industry 4.0” or “Internet of Things” — requires the data collected to be used in a multitude of ways. With EPROMI, ISRA succeeds in laying the necessary foundations at the highest level. The solution enables users to achieve maximum quality, optimize their production, and enjoy optimum, cost-efficient information on processes and products at all times.

**Images**

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EPROMI enables personalized reports of aggregated data for all levels of decision making — from the production line to management.
The product comes with a wide range of predefined industry-specific cockpits. With just a few clicks, users can also set up their own cockpits to cater to their specific information requirements.