Lasys 2008: **plasmo ProcessObserver series**

High-power process monitoring system for industrial welding

- **Online process monitoring for laser welding, cutting and drilling**
- **Automatic real-time quality control**
- **Defects evaluated during processing**
- **Recognition of defects such as pores/seam contraction stress, leaks/spatter, changes in the welding depth, inadequate joints and contaminations**
- **Documentation and storage of sample data in accordance with ISO 9001/2**

New at Lasys 2008: ProcessObserver advanced
- **Dual-channel process monitoring**
- **Process monitoring and performance measurement with a single device**

Plasmo ProcessObserver – a success story
Audi, BMW, Mercedes, VW,… these renowned names in the international automobile industry have been placing their trust in the plasmo ProcessObserver for years now. Developed by a team of experts from a range of disciplines, the ProcessObserver classic became a success, and is now crossing boundaries between industries. Arnold Braunsteiner, CEO of plasmo Industrietechnik, is enthusiastic about his company's success. "We currently have the best products in Europe for quality control using sensor and camera-based solutions." he said. "The possibilities are almost limitless".

Extremely versatile
Numerous clients from a wide range of manufacturing industries have been convinced of the advantages that the ProcessObserver classic has to offer. plasmo ProcessObserver is now successfully being used to monitor the production of:
- Pipes and profiles
- Sensors and switches
- Sheet metal plates/tailored blanks
- Fittings for construction, furniture and windows
- Car seats and seatbelt pretensioners
- Turbine blades
- White goods – from refrigerators to dishwashers to washing machines
- …

New at Lasys 2008: the latest development - ProcessObserver advanced
plasmo ProcessObserver advanced is the result of continued development on the ProcessObserver classic. You can now monitor your processes and measure performance using a single device - a development that completely meets the needs of our clients. "We develop our products both for and in collaboration with our clients. The option of dual-channel process monitoring once again offers our clients numerous new ways of improving the quality of their products and making their quality control more efficient, allowing them to offer their clients the best product possible. This is precisely what motivates us." said Arnold Braunscheiner.

The product: the plasmo ProcessObserver series

Innovative technologies need innovative quality control systems
Processing materials using lasers is among the most innovative technologies in industrial production today. Effectively employing high-powered focused laser systems improves the efficiency of conventional work procedures. The potential for new types of production methods is growing at an exponential rate. This growth means that the demand for automatic quality control systems in laser welding has risen. The challenge for quality control systems is to recognise process defects in real-time and document them.

plasmo ProcessObserver
The plasmo ProcessObserver series is a system of online process monitoring for laser processing (welding, cutting, drilling and soldering). Processes are monitored by observing light that is produced during processing, both in the visible and invisible light ranges.
Fast signal processors provide online classification and ensure that defects are evaluated in real time during processing. An industrial PC is used to provide visual representations and for parameterising. The ProcessObserver series recognises irregularities and defects such as welding deficiencies, porosity (including inside the material) etc. quickly and reliably.

plasmoProcess Observer advanced
The plasmo ProcessObserver advanced is based on state-of-the-art technology. Welding, cutting and drilling processes are examined and documented in real-time without ever making contact with or damaging the product. All data recorded is available for a detailed offline analysis.

What can the plasmo ProcessObserver advanced do?
- An automatic process monitoring system integrated into the production process.
- Defects are recognised immediately; the product is not touched or damaged in any way.
- All production data is documented comprehensively as per ISO 9001/2
- Two independent channels (performance measurement and process monitoring)
- The long-term statistical evaluation features of the ProcessObserver advanced provide an effective means for optimising your processes.
- The entire welding process can be optimised, helping to reduce production costs.
- The Offline Reader and Offline Simulation software can be used to diagnose systematic welding errors.

How does the ProcessObserver advanced work?
Using an optical head, fibre bracket or or an integrated fibre in a processing head, the sensor light is transmitted to a DSP computer (Power PC) via an optic fibre cable. The digital signal, prepared beforehand, is analysed by the signal processor and evaluated. The result is shown in real-time at the end of the welding process by returning IO = is OK or NIO = is not OK on the front display and at one of the outputs. The recorded signal data is also forwarded to a superordinate computer via the RS232 or ethernet interface for visualisation purposes. Parametrisation tools and visualisation software (online and offline) are available. In addition to the statistics module, a range of other useful software tools are available for short-term and long-term analysis.

plasmo Industrietechnik GmbH
plasmo Industrietechnik GmbH is one of the leading quality control companies on the international market, providing sensor and camera-based solutions for the manufacturing industry. The company is active in the fields of laser performance measurement, welding process monitoring, weld seam geometry measurement, industrial image processing and analysis software for quality control, and provides a comprehensive range of support services. The company's ten strong team of experts assists clients from defining their monitoring needs to the implementation of their monitoring system. plasmo's innovative monitoring system plays a role in the manufacture of almost all vehicles produced in Europe, from Audi to VW, as well as in the production of white goods and numerous other industrial products. Internationally renowned clients from ABB to Hettich to Magna, numerous vehicle manufacturers such as Audi, BMW and Daimler and Dutch steel producer Corus place their trust in plasmo quality and plasmo's quality control systems. Started in 2003, the ten-strong company based in Vienna and its distribution partners recorded a turnover of € 1.46 million. At the beginning of 2008, a new plasmo office was opened in Germany, and plasmo distribution partners within Japan also began to do business.

Details for enquiries and further information (press photos, detailed product information,…):

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