Intelligent Sensors
LPKF Milling Plotter in Training
at Sick AG, Waldkirch
Sensors are interfaces for capturing properties of the environment, transmitting them to processing systems. SICK AG has specialized in the development and production of these components for more than 60 years, offering a worldwide leading portfolio of them for plant-, logistics- and process automation. LPKF milling machines are used for training and prototyping – to quickly and inexpensively transform designs and circuit layouts into functioning circuits.

First contact with LPKF was made in Shizouka, Japan: Then trainer, now chief instructor Benno Bohn, came across a milling machines there used to implement the participant layouts at a job competition.

Once back in Waldkirch the decision was made to use the LPKF ProtoMat S62 for the company’s training. The high-quality components yield reliable and accurate structuring results: the convenient equipment with automatic tool change and vacuum table reduces processing time. The built-in vacuum table keeps the PCBs to be structured safely in position, eliminating cumbersome securing with adhesive film. This simplifies working processes, design changes and corrections can quickly be implemented with near-series quality.

A hands-on task where trainees and students are independently introduced to designing and constructing layouts is exemplary. The tasks are often from Equipment Production as well as from Product Development Departments. This type of project is accompanied by intensive design work in Eagle. With the milling plotter the data developed there can quickly be converted into actual PCBs.

An opportunity the Development Department also likes to take advantage of, having their designs for electronics components produced as PCB prototypes.

Nico Zimmermann, trainer for the Electronics and Information Technology Department at SICK AG explains: "the milling plotter allowed us to eliminate an entire lab unit of etching chemicals. We’d rather invest the costs from strict environmental regulations and expensive disposal of the wet chemicals in practice-oriented and advanced training.”

Dedication to teaching and training ranks high at SICK: the 2010 German National Industrial Electronics Technicians Competition will be held at the Europa-Park in Rust. Here Germany’s best industrial electronics technician trainee will be selected, who will then compete in the 2011 world championships in London. As the expert for the German team Nico Zimmermann is responsible for organizing and arranging the competition for the field of industrial electronics. LPKF is also involved: a ProtoMat will turn the competitors’ designs into functional PCBs right on site. 

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For more than 60 years Sick AG has established itself as the technology and market leader in the development and production of modern sensor systems and application solutions. Worldwide the company has about 5,000 employees in 50 locations, with affiliated companies and shareholdings. The customer magazine Sickinsight available in twelve languages and 27 countries provides a good overview of activities.

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LPKF Laser & Electronics AG manufactures machines and laser systems used in electronics fabrication, medical technology, the automotive sector, and the production of solar cells. The worldwide operating company unites competences from laser technology and optics, drive and control technology with extensive experience in the micromachining of materials.