New embedded secure coding training

High Tech Institute, which specialises in professional education for high-tech industries, has recently entered into a collaboration with the Hungarian Secure coding Academy (Scademy), a specialist organisation that focuses fully on training people to write secure code. In October, the "C and C++ secure coding" training was successfully given in Eindhoven, the Netherlands. The next training session is scheduled for 9-11 April 2019 in the same city.

Hungarian company Scademy offers almost forty courses; security for embedded systems is its specialty. Teaching people to write secure code is a labour-intensive endeavour. "The goal is not to teach people how to hack, but to instil paranoia. That emotion is important", says trainer Ernõ Jeges. "It has an impact which you will not get with online training courses."

WWW.HIGHTECHINSTITUTE.NL/SECURE-CODING-TRAINING

Laser Technology Janssen is expanding machining facilities

Two years ago, Laser Technology Janssen (LTJ) from Wijchen, the Netherlands, started with micro-lasering / fine-cutting of precision-formed products from thin sheet and foil material on a five-axis fibre laser. The mechanical department of LTJ was further expanded this year. Now LTJ can also carry out operations such as ultrasonic cleaning and passivation, in addition to fine-machining operations. As a result, LTJ is able to supply small, accurate products with short delivery times and with the right mechanical finishing and surface treatment, ready for installation.
In addition, five-axis fibre-laser micro-lasering / fine-cutting remains an important processing method. In addition to very precise contour cutting, holes and slits of a few tenths of a mm can also be applied with the micro-laser, with tolerances down to a mere ±3 µm. Initially, the choice of materials was limited, but LTJ can now also process materials such as stainless steel, titanium, copper, phosphor bronze, aluminium and various other alloys.

"We also do (micro) bending of sheets/foils with thicknesses of 0.02 to 1.5 mm in-house; this is unique to the market", declares founder/director Toon Janssen. LTJ also specialises in 2D and 3D (micro) laser welding of thin sheets and foils, minimising heat input, as this affects shape and dimensions. "Due to extremely accurate parameter control, we are able to weld super-thin materials without thermal stress."

(Source: www.fpt-vimag.nl/actueel)

WWW.LASERTECHNOLOGYJANSSEN.NL

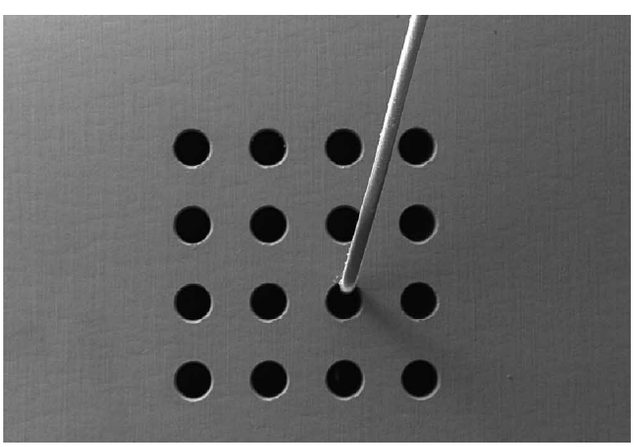
Towards ever-smaller bore holes

Posalux, based in Biel, Switzerland, has introduced a newly designed machine for electronics fabrication that employs Scanlab's highly integrated precSYS 5-axis scan sub-system. The Swiss manufacturer's laser-processing system is specifically tailored to demands of micromachining and is also usable for processing such challenging materials as polymers and ceramics. The machine features precSYS, which enables ultra-precise, high-dynamic beam deflection for guiding the laser spot onto workpieces. New standards in micro-drilling precision are set by results obtained for fabricating electronics test equipment, where bore hole corner radii smaller than 5 µm are now possible.

The integrated sub-system by Scanlab, based in Puchheim, Germany, coupled with an ultra-short-pulse laser, enables processing of highly diverse materials such as metals, polymers and ceramics, without affecting them thermally. The scan solution provides five axes for defined laser beam guidance in the machine's x,y,z coordinate axes and a simultaneously superimposed, adjustable angle of incidence (positive or negative). This makes it ideal for fabricating micro-bore holes with high aspect ratios and freely definable geometries. And the intuitive user interface lets machine operators easily load a bore image, assign process parameters and scan the workpiece surface.

In one application case, Posalux's precSYS infrared machine produced bore holes specified for 30 µm x 30 µm edge lengths, 300 µm material thickness and 10 µm separation. Some 46,000 bore holes were examined for positioning accuracy of ±2 µm, and corner radii smaller than 5 µm were reliably achieved.

The precSYS sub-system is currently produced exclusively for infrared lasers with a 1,030 nm wavelength. A new variant is being developed for green lasers with a 515 nm wavelength, to thereby enable even finer structures and corner radii.



200-µm bore holes drilled in steel with precSYS, compared to a human hair.

WWW.SCANLAB.DE