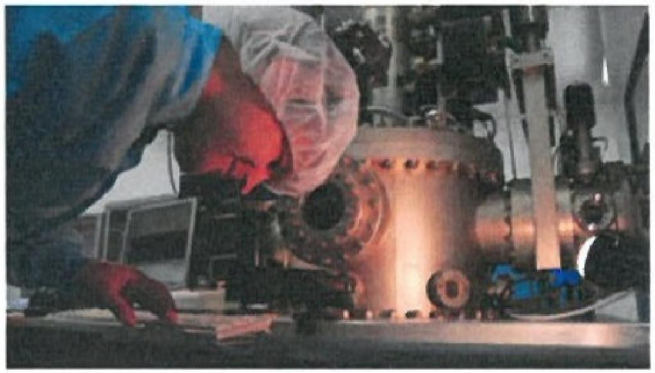
Optaglio Collaborates for the Long-term

Optaglio – the Czech-headquartered surface relief optical security devices and hologram producer – has announced a collaboration programme with university departments and a commercial partner to develop the next generation of e-beam lithography systems, ensuring optical security devices remain many steps ahead of the counterfeiters.



Optaglio's e-beam machine.

Optaglio believe that these new developments will ensure document producers after 2020 will be able to implement security elements that offer anti-counterfeit protection for at least the next 15 years.

Since 1998, Optaglio has continued to invest significant effort and resources into the development of e-beam technology, launching many new innovations, holographic features and visual effects.

E-beam lithography, sometimes referred to as direct-write technology, is currently considered one of the most advanced origination technologies available for master hologram creation.

The technique utilises, instead of a laser, a concentrated stream of electrons and is therefore able to overcome some of the wavelength limits from classical origination techniques.

Conventional surface relief (SR) holograms are typically created with a resolution of approximately 1,000 dots per inch (dpi), with the possibility to go up to 10,000 dpi. E-beam lithography, on the other hand, works with a much higher resolution – in the region of 500,000 dpi.

Optaglio has now improved on this and has achieved 2.5 million dpi, thereby enabling higher resolution security features and more sophisticated visual effects to be incorporated into optically variable devices that are virtually impossible to imitate successfully with other technologies.

Luboš Malák, Optaglio's E-Beam Lithography Divisional Manager, said 'If we want to be a provider that can guarantee anti-counterfeiting technologies for our customers, we are obliged to invest into innovations for the long-term.'

Key parts of the development will be undertaken by the company's in-house research team, which will define detailed tasks and specifications for the hardware, technical requirements, sampling and testing. Other stakeholders involved in the project include undisclosed university departments and a commercial organisation.

The new generation e-beam system is expected to be operational in 2020, and will – says Optaglio – be a milestone in the development of this technology, enabling new features to be incorporated into the next generation of holograms.

Some parts of the development programme are covered by research grants.

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