

**HiLASE Centre presents spin-off Hi-Beams, s.r.o.**

Dolní Brezany, 3/16/2021

**Innovative methods of material surface treatment and a completely new and unique solution in the field of industrial tool preparation, using laser technologies, are available thanks to Hi-Beams, s.r.o., a newly established spin-off of HiLASE Centre and SHM company, an expert on industrial PVD coatings.**

A strategic merger of SHM, s.r.o. and the HiLASE Centre, which is an important part of the Institute of Physics of the Czech Academy of Sciences, v. v. i. created the foundation of Hi-Beams, s.r.o., which was then registered at the Commercial Register, kept by the Regional Court in Ostrava, in January 2021, while the basic deposit was repaid by equal 50:50 shares of the partners.

The idea of establishing a spin-off was initiated by the industrial company SHM, whose motivation was to provide services to create better properties of treated tools beyond the standard parameters of PVD coatings. Furthermore, the creation of a common platform for research, development, and cooperation with industry was also an important impulse to establish Hi-Beams.

The main goal of Hi-Beams is to significantly increase the work efficiency of a tool in the work processes of customers from various fields. Moreover, Hi-Beams' ambition is to become a long-term partner for its customers and provide them with innovative solutions and technological development in the field of preparation and maintenance of industrial tools.

*"We use the technology of laser pulse forging (Laser Shock Peening, LSP), laser texturing (Laser Surface Texturing, LST), but also specific combinations with other technologies of laser processing and conventional surface treatment,"* says the company's managing director, Ing. Petr Mrkos, MBA, and specifies: *"the range of materials to which the methods can be applied includes steels, sintered carbides, non-ferrous metals and their alloys, plastics, glass, cermets and cutting ceramics"*. A significant progress and innovation can be achieved in a wide range of industrial areas when combined with a suitable PVD coating.

Jan Brajer, Ph.D., Head of the Industrial Laser Applications Department at HiLASE and Hi-Beams' Technical Guarantee adds: *"These technologies will be used mainly for machining forging tools, forming, pressing, machining, die casting, but not only for those. We plan to complete parts for a wide variety of industries. The main goal of applied technologies is to increase durability and efficiency."*

Hi-Beams thus generates an interesting offer and an array of application and services, especially in the industrial areas such as automotive, engineering and aerospace. The range of services is also interesting for manufacturing companies, with an emphasis on economic and especially efficient use, preparation and maintenance of tools.

For more information, please visit [www.hi-beams.cz](http://www.hi-beams.cz)

**HiLASE centrum**

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**About HiLASE Centre**

HiLASE Centre (an acronym for High average power pulsed LASERs) is a scientific research centre of the Institute of Physics of the Czech Academy of Sciences. The present research programme of the Institute comprises five branches of physics: particle physics, the physics of condensed matter, solid-state physics, optics and plasma physics.

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**About FZU**

The Institute of Physics (IOP) is a scientific workplace dedicated mainly to basic research and is part of the Academy of Sciences of the Czech Republic (AS CR). The main activity of IOP is scientific research in the field of physics, especially physics of elementary particles, condensed systems, solids, optics, plasma physics, and laser physics.

[www.fzu.cz](http://www.fzu.cz)

**About SHM**

SHM is a purely Czech company, which belongs to the pioneers of industrial preparation of PVD coatings in the Czech Republic. PVD coatings can significantly increase the useful properties of tools, molds and parts. Thanks to its own research, development and many years of experience, it offers unique surface treatment solutions.

[www.shm-cz.cz](http://www.shm-cz.cz)

**About Hi-Beams**

Hi-Beams provides completely new and unique solutions in the preparation of industrial tools using laser technology. The main goal is to significantly increase tools efficiency in the processes of customers from various fields.

[www.hi-beams.cz](http://www.hi-beams.cz)

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## Attachment



*Ing. Tomáš Mocek, Ph.D. | Head of the HiLASE Centre; Ing. Petr Mrkos, MBA | Managing director Hi-Beams, Mojmír Jílek | Owner of SHM company*

Download photography in high resolution from [HERE](#).

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