

Hightech-Hardware with soft skills combined

The aerospace industry paves the way for new materials and material combinations. After all, airplanes must be made lighter and more resource-efficient, and it is only innovative tool systems that can help with cost-effective processing. An expert in this sector in Russia is SKIF-M Ltd., which now designs its own CC800® HiPIMS-optimized coating solutions for its cutting inserts.



Dr. Alexander Moskvitin, CEO of SKIF-M Ltd. (right), with Anton Gubanov, Manager of Coating Technology, is convinced that HiPIMS puts SKIF-M in a top position.

"In particular, the new coating materials AluCon® and InoxaCon® were the criteria we used to shortlist CemeCon as a supplier for our coating line. Coating properties such as hardness, smoothness and tool service life extremes convinced us very quickly that they will greatly enhance our inserts for milling tools," says Dr. Alexander Moskvitin, CEO of SKIF-M Ltd., based in Belgorod, an internationally established Russian tool manufacturer in the aviation industry. It focuses on the production of complex insert milling systems for typical aviation materials, with titanium, nickel-based materials and aluminum alloys, none of which are lightweights when it comes to machining.

Cutting inserts specialists among themselves

In order to be a competent and reliable partner to the suppliers of the aircraft industry, continuous optimization of existing machining solutions are high on the list of requirements expected of tool

manufacturers. "Our many years of experience in this industry have shown us that coatings have a significant impact on tool performance. In addition to future-focused technology, in our search for a supplier of coating systems, support was crucial to us – before and especially after the purchase of the system," says Dr. Alexander Moskvitin. "The CemeCon technicians gave us very precise instructions and advice, and they are highly competent in Russian," adds Anton Gubanov, Manager of Coating Technology at SKIF-M.

Traditionally equipped in the coating center in Würselen with its own coating line for cutting inserts, CemeCon put all the necessary expertise for this type of tool in the balance. "In addition, we focus on service very intensively because, from our point of view, it is only through the right training, on-site, that the entire system consisting of tool manufacturing and material-related coating can succeed in the best way possible," says Ilya Mozgov of AO Rosmark-Steel, CemeCon partner in Russia.

Invested in the future

AluCon®, the new TiB₂-based HiPIMS coating material, makes it possible to process aviation materials, such as TiAl6V4 and aluminum alloys without built-up edges. "Our international customers make the best aircrafts and demand the best tools. As a unique selling point, AluCon® puts us in the top position," says a delighted Dr. Moskvitin.



Eric Knipprath, production expert in cutting inserts for CemeCon (middle), trains the SKIF-M team in Belgorod.

With the HiPIMS system, SKIF-M now has a wide range of options for coordinating its high-performance

cutting tools. The Russian company also benefits from CemeCon technology for its second large market – cutting inserts for heavy duty machining of train wheels and chassis. "In this segment, 'thick layers' with 6 and even 9 µm of coating thickness are a real competitive advantage for our milling inserts! In general, we expect many more successful tool generations and satisfied customers from the HiPIMS system. After all, with CemeCon we have the ideal support in all coating situations," summarizes Dr. Alexander Moskvitin.

SKIF-M Ltd.

SKIF-M Ltd. was founded in 1993 in Belgorod, Russia, from a scientific laboratory and a milling tool manufacturing plant. All tools, primarily cutting inserts for the machining of titanium and other aviation materials, and for steels, are developed in our own design office, where we can count on more than twenty years of experience. State-of-the-art production methods enable series production with short lead times and special designs for export to Germany and the USA. In the standard program, SKIF-M covers diameters from 6 mm to 1000 mm. 70 percent of the SKIF-M tools are specifically developed for machining aerospace materials and the others are designed for heavy duty machining in rail transport.



www.skif-m.net

Cutting inserts ■ Cutting inserts ■ Aerospace ■ Aircraft industry ■ CC800® HiPIMS ■
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