

It all comes down to choosing the right partner

Metco has left the Sulzer Group and is now part of the Oerlikon Group.

oerlikon
metco

Long-term cooperation with coating experts is essential for tool manufacturers, as is shown by the successful partnership of the Metz Company and Sulzer Metco.

Frank Schönberner is a welcome guest at the Wolfgang Metz e.K. company. He is a field service employee of Sulzer Metaplas and advises the tool manufacturer on site at regular intervals. The family company, which has offices in Zell am Harmersbach, Germany, has been manufacturing cutting tools for more than 30 years, and it supplies clients in many different industries throughout Europe. These industries include tool, mold, model, and machine construction, as well as medical technology. Thanks to Metz's modern machinery, which consists of several numerically controlled machines as well as manual grinding machines, not only standard tools but also special precision tools are manufactured to the highest level of quality.

The drive towards longer service lives and the continually increasing requirements on tools have always been primary topics in machining. Therefore, high-quality tools are nowadays supplied with coatings. Coated tools make high cutting and feed rates possible and reduce processing times. Thanks to state-of-the-art coatings, even materials that were once impossible to machine can now be processed—particularly in dry and hard milling.

"We have almost 100% of all tools coated nowadays," explain managing directors Wolfgang and Daniel Metz, and they emphasize the importance of cooperation and the selection of the right coating partner. "The outstanding quality of the coating solutions from Sulzer has won us over time and again," says Daniel Metz.

Frank Schönberner and his colleagues from the customer service of Sulzer Metaplas are always present when it comes to working together with the customer to develop and test suitable tool solutions. Application-specific coating solutions are the focus at Metz, because the company regards itself as a problem solver for individual customer requirements.

Together towards success with M.POWER

The Metz Company is particularly impressed with the new M.POWER coating from Sulzer. The latest tests at Metz have delivered excellent results: when hard milling a high-performance, high-speed steel (CPM® Rex® M4) with a hardness of 62 HRC (Rockwell hardness), the

M.POWER coating was able to achieve a service life that was up to 80% longer than for that of a tool coated with titanium aluminum nitride.

The titanium-silicon-based M.POWER coating reduces the wear and the friction at the coated cutting edge—in particular, at high cutting speeds and in dry processing. Different coating architectures can be chosen and these permit the efficient machining of numerous materials.

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These materials include alloyed and high-alloy tool steels, cast iron, titanium, and titanium alloys, as well as nickel-based alloys. High wear resistance and a hardness of up to 3600 HV (Vickers hardness) characterize the particularly smooth coating. The low tendency to form build-up edges and oxidation resistance at up to 1150 °C completes the high surface quality.

The success of the M.POWER coating shows where the trend is heading: away from conventional standards and towards tailor-made solutions. Metz has responded to this trend and is already relying on its close cooperation with Frank Schönberner and his colleagues from Sulzer in the development phase of its tools.

Through its close cooperation with customers, Sulzer succeeds in adapting the coating solutions to the tool material, the application, and the special geometry of the tool.



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