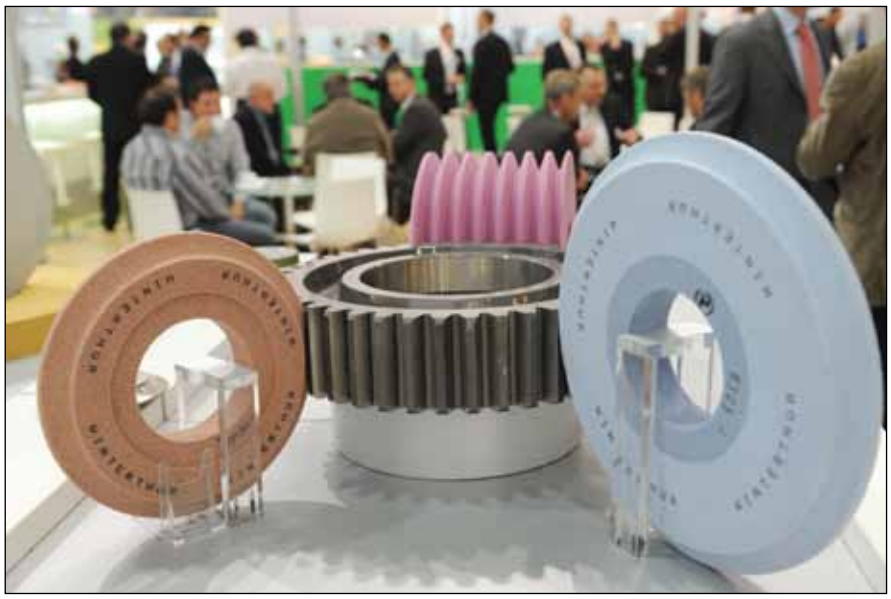
EMO Hannover—More Than Machine Tools

From September 19–24, EMO Hannover highlighted machine tools, manufacturing systems and computer technology. Sponsored by the VDW (German Machine Tool Builders Association), the exhibition started off with an optimistic look at the future of the machine tool industry. "The international machine tool industry is in excellent health and demand continues at a very high level," stated Martin Kapp, chairman of the VDW, in his opening address. "The VDW looks forward to a successful trade show and continued strong international demand for machine tools."

Highlights from this year's "More Than Machine Tools" theme included Kapp's machine tool integration, Höfler's gear hobbing technology, machine tool automation from Stäubli Robotics, SolidCAM's *iMachining* software and new measurement technology from Renishaw.



Winterthur grinding wheels were on display at EMO Hannover 2011 (courtesy of EMO).

Kapp's System Integration. The exhibitors from Kapp were on hand to discuss the advantages of the new Weisser-Kapp Cell. As the company points out, a reduction of cycle times in machine tool manufacture is realized via systems integration, whereby intelligent solutions are called for if technologies cannot be combined easily in the workspace. The cell presented was billed as an innovative solution for the highly productive finish machining of gears. In the cell, the machining of reference surfaces is performed by Weisser rotational turning on a Univertor AC-1 machine. Finally, the tooth flanks are machined by generation grinding using a Kapp KX 100 Dynamic center. The innovative two-spindle pick-up concept is claimed to ensure minimal process auxiliary times and a small set-up input. With an integrated loading system and automatic changing of the workpiece clamping device, the machine solution as a standalone unit is suitable for the highly productive mass production of external spur and helical gears. For more information, visit *www.kapp-niles.com*.

Höfler Gear Hobbing. Höfler is a German specialist for gear grinding and gear hobbing machinery. As the company points out, gear hobbing machines are workhorses and operate with extreme forces. This means they have to be solidly constructed as well as meeting the highest possible requirements for machining accuracy. Höfler announced that a new hobbing head with an innovative hob arbor holder of the type Capto has been added to their gear hobbing machines in the HF series. Thanks to the technical improvements of the hobbing head as well as the robust and particularly rigid machine design, the machine series is suitable for highly productive dry processing. For more information, visit *www.hofler.com*.

Stäubli Automation Solutions. At EMO Hannover, Stäubli Robotics presented the new RX170 hsm milling robot as well as automation robotic solutions for the loading and unloading of machine tools. With its five-axis articulated RX170 hsm robot, Stäubli has created an alternative to the machine tool with high-speed precision machining. Stäubli has identified a whole series of operations such as milling, deburring, trimming, drilling and tapping suitable for this new product. The second major theme of Stäubli's trade fair display is the automation of machine tools. Robot solutions from Stäubli are aimed at enhancing overall productivity. This starts with the reduction of idle times by means of rapid, fully automatic loading and unloading of machinery, continues with the minimization of machine downtime and culminates in the semi-autonomous operation of machine tools in unmanned shifts. For more information, visit *www.staubli.com*.

iMachining Demonstrations Attendees witnessed an entirely new level of metal cutting performance when they visited SolidCAM's booth at EMO Hannover. Guided by the company's "Technology Wizard," the latest CAM system offering, iMachining, boasted shortened cycle times, extended tool life, programming speed and the ability to use even the smallest tools in cutting the hardest materials. Visitors were welcomed with real-time, live cutting demonstrations that could save up to 70 percent of machining time and simplify CAM programming.

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SolidCAM's iMachining differs from other CAM systems, both in ease of programming and the quality of the toolpaths generated by its exclusive algorithms. Unlike other CAM systems that leave users guessing at machining parameters like speeds and feeds, iMachining uses a patented "Technology Wizard" that guides users through all steps to optimize the production job. With the Wizard, iMachining uses tool length, diameter, and number and angle of flutes, together with material and machine properties, to generate smooth morphing spiral toolpaths which ensure constant cutting force on the tool. If you missed the event at EMO, SolidCAM has iMachining demonstrations on YouTube, Facebook, Twitter and the SolidCAM website (*www.solidcam.com*).

For a full recap of EMO Hannover 2011, visit *www.emo-hannover.de*

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