

FOR IMMEDIATE RELEASE

The Next Level of Performance: 3M™ Cubitron™ II Conventional Wheels for Gear Grinding *Innovative abrasive technology enables greater productivity*

ST. PAUL, Minn. – Oct. 30, 2013 –3M Abrasive Systems is introducing **3M™ Cubitron™ II Conventional Wheels for Gear Grinding**, giving engineers new tools to take the manufacturing processes to the next level of productivity. These gear grinding wheels are the result of incorporating both 3M’s revolutionary precision shaped grain and state-of-the-art bonding systems, which enable a new dimension of gear grinding performance—helping achieve consistent, high quality finishes and tight geometry tolerances, part after part, while increasing the efficiency and productivity of manufacturing operations.

In 2009, 3M launched the first Cubitron™ II brand coated abrasive product incorporating 3M Precision Shaped Grain technology. “Customers found tremendous improvement in processing speeds and product life making it one of our most successful product launches ever,” said Dan Cunningham, Director Sales and Marketing, 3M Abrasive Systems. Since that time 3M has begun to extend their Precision Shaped Grain technology into their bonded abrasive products providing similar benefits. “We’re very proud to introduce these new bonded products to our Cubitron II family.”

Last year's introduction of the Cubitron II Bonded Abrasives containing 3M Precision Shaped Grain represented a major transformation of the grinding process. Now, the launch of Cubitron II Bonded Abrasives for gear grinding is giving engineers a broad range of benefits in gear grinding, including increased throughput, less wheel dressing, a dramatically lower risk of burning, extended wheel life and consistent grinding performance.

This level of performance is made possible by combining the benefits of state-of-the-art bonding systems with the precision shaped grain technology pioneered by 3M. While conventional ceramic abrasive grains tend to “plow” through metal, resulting in a slower cut and shorter wheel life, the precision shaped grains of Cubitron II continuously fracture as they wear, forming sharp points and edges that slice through metal, wear evenly and provide super-long life and consistency under

normal grinding pressure.

“By traditional standards, grinding generally refers to machining with *undefined* cutting edges, while turning and milling utilize *defined* cutting edges,” says Walter Graf, Global Segment Leader, 3M Abrasives Division. “The grain in 3M™ Cubitron™ II abrasives turns this definition on its head!”

For the first time, a grinding wheel can claim to be made up of “geometrically defined cutting edges” as each and every grain is exactly the same, engineered shape. By looking at the resulting “flowing” chips from these new grinding products, it might be more appropriate to talk about the process as “micro-milling” rather than grinding. These free-flowing chips no longer clog up the grinding wheel and, therefore, the grinding wheel remains free-cutting without loss of cutting ability.

In repeated tests, this has shown to drastically reduce the risk of burning and to give consistent and predictable results.

“The tests aren’t perfectly created scenarios, either – we’re talking about long-term trials under production conditions that have shown grinding times being cut, in most cases, by at least 50% in comparison to grinding wheels made of standard ceramic abrasives,” continued Graf. “You can see why we’re so excited!”

The initial family of Cubitron II Gear Grinding Wheels includes products available in single rib, threaded and spiral bevel configurations. To learn more about Cubitron II Gear Grinding Wheels, visit www.3M.com/abrasives.

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About 3M

3M captures the spark of new ideas and transforms them into thousands of ingenious products. Our culture of creative collaboration inspires a never-ending stream of powerful technologies that make life better. 3M is the innovation company that never stops inventing. With \$30 billion in sales, 3M employs about 88,000 people worldwide and has operations in more than 70 countries. For more information, visit www.3M.com or follow @3MNews on Twitter.

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