

NanoMech Receives Grant to Test Nanolubricant

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Funds Will Optimize Novel Materials to Achieve Friction & Heat Reduction across Various Manufacturing Sectors

The United States National Science Foundation has awarded NanoMech, Inc. a Phase I grant focused on applying NanoMech's proprietary and patent-pending nanotechnology innovations to improve machining and grinding processes across a broad range of applications in manufacturing.

According to the Department of Energy, the annual cost of friction and wear related energy and material losses is estimated to be 5% - 7% of national gross domestic product. In the United States, this amounts to nearly \$1 trillion annually. The use of NanoGlide™, NanoMech's innovative nanolubricant, is expected to reduce significantly friction and heat generation at the machining interface, resulting in excellent surface finish, reduced thermo-mechanical damage and greatly improved surface integrity of the machined parts resulting in longer life and quality performance.

This is further recognition of NanoMech's unique processes, and builds on previous technical success in manufacturing nanosized additives for advanced lubrication with applications in all types of machines from windmills to racecars.

Jim Phillips, Chairman of NanoMech, commented, "This exciting project represents a direct advancement of the state of the art in research and development in this area, leading to effective technology transfer and commercialization of a new, more advanced nanomanufactured product. We are honored that one of the world's most prestigious agencies - the National

Science Foundation - chose to award and fund this grant to NanoMech Corporation to help move the U.S. forward in leading important nanotechnology breakthroughs in smart manufacturing and the future of high-performance machines.



NanoMech's NanoGlide™ lubricant offers significant reduction in friction and heat generation resulting in lasting performance.

This investment by the National Science Foundation will likely lead to significant additional innovation by NanoMech along with its industrial partners in the automotive, heavy-equipment, and energy industries to achieve dramatic advances in machining and manufacturing processes. The research will provide a sustainable Minimum Quantity Lubrication (MQL) solution for a range of key

infrastructure-related manufacturing industries such as heavy machinery, automotive, bearings, railways, electric motor casings, and much more. The potential economic benefit to the nation is enormous."

Keith Blakely, NanoMech's CEO, said "Inspiring process innovation and the competitiveness of US manufacturers is essential for the nation to come out of the current economic slump and provide sustainable economic growth. The potential of MQL to provide energy savings, positive environmental impact, and improved worker safety are vital goals while simultaneously achieving increased productivity. The proposed innovative research effort, invented at the University of Arkansas using the NanoGlide platform technology, is focused on revolutionizing and replacing recirculating lubricant systems, which are sources of excessive process and product variation, yield losses, and significant waste streams." 