

NEWS RELEASE

FOR IMMEDIATE RELEASE

MAY 17, 2000

Dynamet Technology Announces Receipt Of DoE Grant For Commercialization Of Its Titanium Matrix Composite

The Department of Energy has awarded Dynamet Technology, Inc. of Burlington, Massachusetts a research grant in the amount of \$199,984. This award is for the commercialization of Dynamet's newly developed titanium matrix composite, CermeTi[®], for significant applications as tooling for the aluminum die casting industry. Preliminary evaluations of the titanium composite have indicated a potential fivefold increase over the life of existing tooling materials when exposed to the molten aluminum over time. Use of this material manufactured into casting tool components by Dynamet's innovative powder metal technology is expanding. Teaming with Dynamet in this program is the Metal Processing Institute at Worcester Polytechnic Institute (WPI) and Oak Ridge National Laboratory (ORNL). Preliminary calculated energy and cost savings could reach almost \$100,000,000 annually.

Additionally Dynamet Technology, Inc. announced that it is currently working on a Phase II National Science Foundation program which is developing a unique superplastic forming process for titanium composite materials called *transformation mismatch superplastic forming*. This program is a Phase II SBIR (Small Business Innovative Research Program) funded by NSF. The investigation includes the participation of metallurgists at Northwestern University.

Dynamet Technology, Inc., a pioneer in titanium powder metal manufacture, also announced that it was awarded the 1999 Grand Prize in particulate materials for its development of a titanium alloy ‘softball bat shell’ by the MPIF (Metal Powder Industries Federation). This new commercial product sold by one of the major softball bat producers is based on the technology Dynamet had developed earlier for the manufacture of components for Sidewinder and Stinger missiles. The significant technological improvement, *performance and durability*, is marketed as technology transfer **“from the battlefield to the ballfield”**.

The Burlington, Massachusetts company further announced that the advancement into commercial applications for its titanium composites is underway at several international automotive companies. Initial evaluations have indicated significant advantage in the design of components where the lightweight of the titanium composite combined with its higher modulus and increased wear resistance improve the performance of connecting rods, piston pins, exhaust valves and crankshafts.

Mr. Stanley Abkowitz, President at Dynamet Technology indicated that the renewed interest in titanium automotive applications is based on the improved properties offered by the composite and the lower cost associated with the powder metal near net shape manufacturing technology. The emphasis on these advanced materials is based on the more stringent fuel economy requirements and environmental restrictions being imposed on the automotive industry.

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