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Investigation of Boron Nitride-based Nano Composite in Cutting Tool for Enhancing Efficiency

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Abstract:

Many production processes make use of machining tools. The performance characteristics of the tools greatly influence the cost and quality of the final products. The existing machine is improved with superior qualities by the reinforcement of diverse materials with based materials made utilising new manufacturing techniques. Due to its high strength and light weight characteristics, aluminum composites are quickly making their way into commercial use. Steel, cemented carbides, ceramics, and exceptionally hard materials are the primary materials utilized to make machining tools. Creating new Nano composites based on these materials is a promising strategy to enhance their performance properties. Steel, cemented carbides, ceramics, and exceptionally hard materials are the primary materials utilized to make machining tools. Creating new Nano composites based on these materials is a promising strategy to enhance their performance properties. Micromechanical modeling can be used to produce composite materials for machining tools, lowering the cost and time associated with creating new tools with improved performance. In order to improve the performance and properties of machining tools, this article covers recent developments in various nano composites groups.

Keywords:

Wear, Nano Composites, Aluminum 356 Alloy.