World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Optimization of Cutting Parameters during Machining of Fine Grained Cemented Carbides

Authors : Josef Brychta, Jiri Kratochvil, Marek Pagac

Abstract : The group of progressive cutting materials can include non-traditional, emerging and less-used materials that can be an efficient use of cutting their lead to a quantum leap in the field of machining. This is essentially a “superhard” materials (STM) based on polycrystalline diamond (PCD) and polycrystalline cubic boron nitride (PCBN) cutting performance ceramics and development is constantly "perfecting" fine coated cemented carbides. The latter cutting materials are broken down by two parameters, toughness and hardness. A variation of alloying elements is always possible to improve only one of each parameter. Reducing the size of the core on the other hand doing achieves "contradictory" properties, namely to increase both hardness and toughness.

Keywords : grained cutting materials difficult to machine materials, optimum utilization, mechanic, manufacturing
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020