
Contemporary trends in cutting fluid usage for high-performance machining of materials with poor machinability

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Cutting fluids (CF) are integral to machining of poorly machinable materials (PMM), ensuring significant tool durability and high quality finish of the treated surface. CF should possess both good functionality and a combination of performance characteristics allowing them to be used in contemporary manufacturing, taking into account environmental, technologic and economic requirements. The article presents a review of Russian and international publications dealing with CF used in machining of materials with poor machinability. We determine the primary trends in using CF during machining PMM in the global practice and outline their advantages and disadvantages.

Keywords: machining, poorly machinable materials, cutting fluids, titanium alloys, corrosion-resistant steel

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