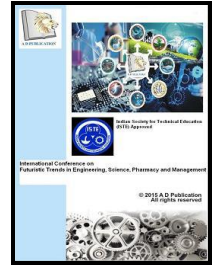




International Conference on
**Futuristic Trends in Engineering, Science,
Pharmacy and Management**

ISBN:



Numerical simulation for formation of water jet in pure Water jet machining process

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ABSTRACT : Recent technological progresses often bring along a down-sizing of products together with small tolerances and high precision: this trend push machining technologies to continuously improve in order to reach higher and higher standards of quality and precision on the work pieces and the capability to machine always smaller and more complex parts. Water jet cutting has always been a promising technology because of its inner simplicity and its extreme flexibility, even if often it suffers a lack of high precision, especially if compared to technologies such as laser cutting. The aim of the present work is to perform a CFD numerical simulation of a pure water jet in order to investigate its flow parameter and its distribution inside water jet nozzle. This work is actually a first attempt to understand the flow phenomena inside the nozzle at very high pressure

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Keywords: CFD, Water jet machining,

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