

## الإنتاج العلمى لمركز بحوث العلوم الهندسية





Effect of Interlayer Temperatures and Heat Inputs on Porosity and Hydrogen Solubility in	
Wire Arc Additive Manufactured AA2618 Aluminium	
Authors	P. Satishkumar, Barun Haldar, Naveen Mani Tripathi, Ankit Sharma,
	Dhaval Jaydevkumar Desai, Vijay Kumar Sharma, S. Seenivasan, Atul
	Babbar
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**Abstract:** This book provides knowledge about the process of creating and designing products based on an Industry 4.0 setting. The fundamentals of Additive Manufacturing. its many technologies, the process parameters, advantages, limitations, and recent developments are discussed. In addition, the most recent post-additive manufactur- ing process advancements, surface quality defects, and challenges are the primary topics that will be investigated in the book.

Advances in Pre- and Post-Additive Manufacturing Processes: Innovations and Applications provides scientific and technological insights into the physical funda- mentals of the machining and finishing processes in macro, micro, and nanoscales. It explores in a systematic way both conventional and unconventional material-shaping processes with various modes of hybridization concerning theory modelling and industrial potential. It focuses on the applications of Additive Manufacturing that are linked to pre-stage and post-stage processes and encompasses a broad spectrum of macro, micro, and nano-processes that are utilized in manufacturing activities. The book goes on to cover a wide range of reliable and economical fabrication of metallic parts with complicated geometries which are of considerable interest to the aerospace, medical, automotive, tooling, and consumer products industries. This reference title encapsulates the current trends of today's material devel- opment and machining techniques for advanced composite materials, making it a one-stop resource for academic researchers and industrial firms while they are for- mulating strategic development strategies. It also serves as a reference book for stu- dents at all levels of education, from undergraduates to doctoral candidates.

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