HATCHING STRATEGY: 3D VISUALIZATION MODEL FOR POWDER BED BASED ADDITIVE MANUFACTURING WITH FOCUSED BEAMS

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ABSTRACT

The hatching strategy is crucial for the layer by layer additive manufacturing process and understanding the properties of components produced by this technique. In this paper we intend to demonstrate the possibility to visualize the macrostructure of components fabricated by the AM laser beam resulting from different building strategies. The present paper will deal with component's bulk material building and further work will cover the other two subjects, namely, component's surface layer (skin) material building and support's structure building. A comparison to actual built AlSi10Mg components is shown, providing a better understanding of the visualization model.

KEY WORDS: Additive manufacturing, laser beam.

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