

Microstructures and Mechanical Property of ti6al4v - a Comparison between Selective Laser Melting, Electron Beam Melting and Spark Plasma Sintering

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Abstract : Microstructural inhomogeneity in additively manufactured materials affects the material properties. The present study aims in minimizing such microstructural inhomogeneity in Ti6Al4V alloy fabricated using selective laser melting (SLM) from the gas atomized powder. A detailed and systematic study of the effect of remelting on the microstructure and mechanical properties of Ti6Al4V manufactured by SLM was compared with electron beam melting and spark plasma sintering.

Keywords : additive manufacturing, selective laser melting, Ti6Al4V, microstructure

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