

A Brief Review of Titanium Powders Used in Laser Powder-Bed Fusion Additive Manufacturing

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Abstract : Metal powder is the raw material used for laser powder-bed fusion (LPBF) additive manufacturing (AM). There are many metal materials that can be used in LPBF. The properties of these materials are varied between each other, which can affect the building part. The objective of this paper is to do an overview of the titanium powders available in LPBF. Comparison between different literature works will lead us to study the similarities and differences between the powder properties such as size, shape, and chemical composition. Furthermore, the results of this paper will point out the significant titanium powder properties in order to clearly illustrate their effect on the build parts.

Keywords : LPBF, titanium, Ti-6Al-4V, Ti-5553, metal powder, AM

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