

Analysis of the Production of Complex Part Components of Stainless-Steel 316L by Selective Laser Melting

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Abstract

The current study focuses on the state-of-the-art review of Selective Laser Melting (SLM) process on SS316L stainless-steel to provide complete information to the readers on the 3D printability of this material. There has been a great demand of SS316L due to the wide range of applications and excellent mechanical and anti-corrosion properties. Whether it is an automobile sector or the sector of aerospace engineering, be the marine engineering sector or the field of medical-science, everywhere this material has found its application in fabricating the most complex part or components. The 3D printing of SS316L has become popular in these high risk sectors and gaining momentum day-by-day. This article will provide detailed information on the effect of SLM process parameters on the microstructure and quality of SS316L printed parts.

Keywords

Hatch-Spacing, Laser Power, Layer-Thickness, Scanning-Speed, SLM.

