Project Title:

Optimization of FDM 3D printing parameters for the fabrication of light-weight parts with high performance polymers

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Application document: CV

Project Description:

Fused deposition modeling (FDM) technique has been widely used in industry as they provide advantages such as potential to create geometrically complex parts without tooling costs. 3D printing light-weight foam components with high performance polymers is of interest in aerospace industry to reduce the cost where the thermal insulation is also a main concern. Thereby, foam filaments for 3D printing were developed and this research aims to identify the suitable printing parameters in the production of light-weight aerospace parts with good print quality and shortest print time. The geometrical design of the part will also need to be optimized to meet the required mechanical and physical properties.

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