Chair of Materials Engineering of Additive Manufacturing
TUM School of Engineering and Design
Technical University of Munich

Semester Thesis / Research Practice

Comprehensive Technology Evaluation of the New JEOL EBM Machine

Motivation

The additive manufacturing technology has made significant strides in recent years and is increasingly being utilized across various industrial sectors. JEOL's new Electron Beam Melting (EBM) machine promises groundbreaking capabilities in terms of speed, precision, and material diversity. Given these innovations, a thorough analysis and evaluation of the technology are necessary to fully understand its potential and applications.

Objective

The primary objective of this thesis is to conduct a comprehensive technology assessment of JEOL's new EBM machine. This includes examining its performance, applications, advantages and disadvantages compared to other additive manufacturing methods, as well as potential challenges and opportunities for improvement. Additionally, recommendations for optimal utilization and integration of the technology into industrial processes will be derived.

Tasks

- Literature Review
- Technical and Economical Analysis
- Comparison with Other Additive Manufacturing Methods
- Assessment of Challenges and Improvement Potential as well as Recommendations for Action

Your profile

- Independent and conscientious way of working
- Very good knowledge of German or English

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Published: 21.05.2024