

Masterarbeit / Bachelorarbeit

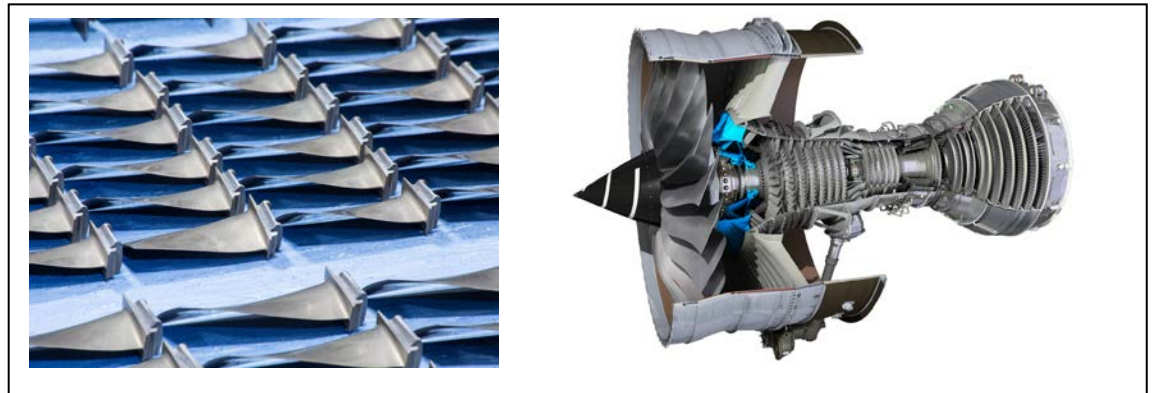
Thema: **Microstructural Stability of Superalloys Prepared by Metal Injection Molding**

Beginn: From April, 2017

Beschreibung: Metal injection molding (MIM) offers new opportunities for the design and fabrication of advanced superalloy parts. MIM processing is able to produce near net shape superalloy parts with complex dimensions. The technology is particularly suitable for large volume production. However, superalloys powders now used for MIM are not intentionally designed for MIM process.

Our project, cooperating with Rolls-Royce Germany, is focusing on the development of new superalloy powders by modifying minor additions C, B, Hf and Zr based on CM247LC. The work is intended to understand the effect of minor additions on the aging microstructures of superalloys. Optical Microscope (OM) and Scanning Electron Microscope (SEM) are needed for the analysis. Additionally, tensile properties will be tested with specimens after long time aging.

Ort: WTM Erlangen
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The supervisor would like to provide additional information on the MIM processing and other issues that may be interested.