

Characterization of near-zero pressure powder injection moulding with sacrificial mould by using fingerprint geometries

PETER VALLER ET AL., 2020. MANUFACTURING TECHNOLOGY, VOL 69

Keywords: 3D print, Metal Injection Molding

This paper presents a process chain of powder injection moulding with sacrificial moulds. The mould is fabricated by vat polymerization based additive manufacturing, which enables production of complex metal parts. A special metal feedstock is developed, which allows near-zero injection pressure. The part is ejected together with the polymer mould. After the mould is dissolved, the released part is debinded and sintered. Micro features are printed on the mould surfaces, and the quality of the part is correlated with the replicated features in each process step. In this way the micro features are used as quality indicator, namely, a fingerprint.

[Read more here.](#)