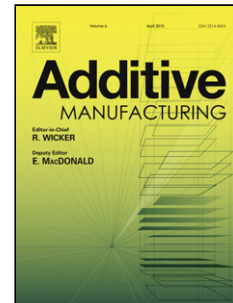


## Accepted Manuscript

Title: Material interactions in laser polishing powder bed additive manufactured Ti6Al4V components

Authors: Yingtao Tian, Wojciech S. Gora, Aldara Pan Cabo, Lakshmi L. Parimi, Duncan P. Hand, Samuel Tamas-Williams, Philip B. Prangnell



PII: S2214-8604(17)30449-9  
DOI: <https://doi.org/10.1016/j.addma.2017.12.010>  
Reference: ADDMA 262

To appear in:

Received date: 3-10-2017  
Accepted date: 25-12-2017

Please cite this article as: { <https://doi.org/>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Material Interactions in Laser Polishing Powder Bed Additive Manufactured Ti6Al4V Components

Yingtao Tian<sup>1</sup>, Wojciech S. Gora<sup>2</sup>, Aldara Pan Cabo<sup>2</sup>, Lakshmi L. Parimi<sup>3</sup>,

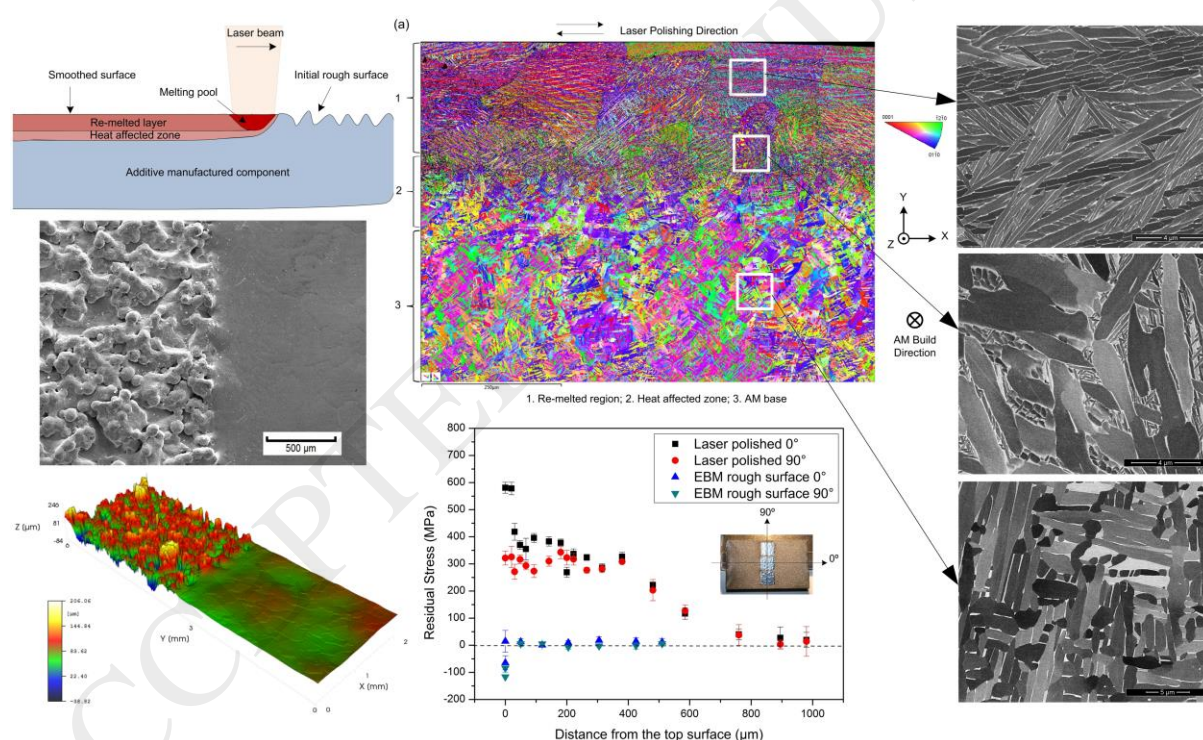
Duncan P. Hand<sup>2</sup>, Samuel Tammas-Williams<sup>1</sup>, Philip B. Prangnell<sup>1</sup>

<sup>1</sup> School of Materials, University of Manchester, Manchester, M13 9PL, UK

<sup>2</sup> School of Engineering & Physical Sciences, Heriot-Watt University, Edinburgh, EH14 4AS, UK

<sup>3</sup> GKN Aerospace, Filton, Bristol, BS34 9AU, UK

## Graphical abstract



## Abstract

Laser polishing (LP) is an emerging technique with the potential to be used for post-build, or in-situ, precision smoothing of rough, fatigue-initiation prone, surfaces of additive manufactured (AM) components. LP uses a laser to re-melt a thin surface layer and smooths the surface by exploiting surface tension effects in the melt pool. However, rapid re-

Download English Version:

<https://daneshyari.com/en/article/7205908>

Download Persian Version:

<https://daneshyari.com/article/7205908>

[Daneshyari.com](https://daneshyari.com)