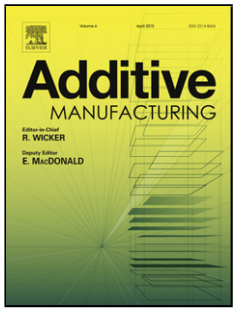

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Material Interactions in Laser Polishing Powder Bed Additive Manufactured Ti6Al4V Components

Yingtao Tian[1], Wojciech S. Gora[2], Aldara Pan Cabo[2], Lakshmi L. Parimi[3],

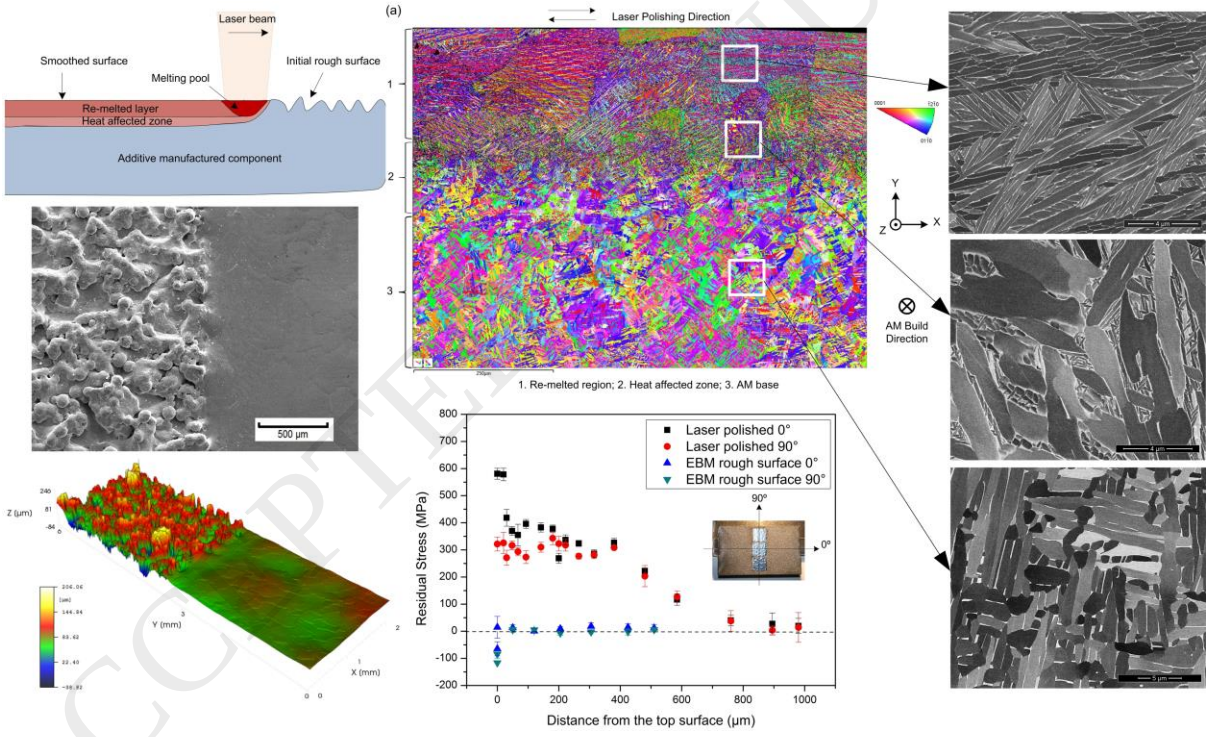
Duncan P. Hand[2], Samuel Tammas-Williams[1], Philip B. Prangnell[1]

[1] School of Materials, University of Manchester, Manchester, M13 9PL, UK

[2] School of Engineering & Physical Sciences, Heriot-Watt University, Edinburgh, EH14 4AS, UK

[3] 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-