

LASERFLEX *Conflux*

Experience

Direct

Multi Metal Printing

an exceptional improvement of PBF Processing

The LASERFLEX Conflux is a result of advanced, patented technology, that enables direct precision printing of multiple materials to obtain functional graded metals. Using a new process and a powder bed approach, the conventional Powder Bed Fusion (PBF) technique has been dramatically improved, resulting in:

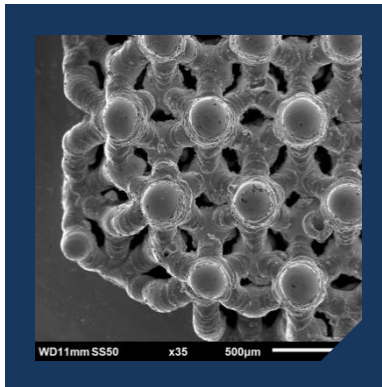
- Low internal stress buildup during densification, resulting in low residual stress and improved resolution.
- Homogenous microstructure, resulting in high quality material properties without annealing.
- Safe and environmentally friendly operation, with precise powder handling.
- Multi and / or functional graded material buildup in one build process.



The LASERFLEX Conflux upgrades the Powder Bed Fusion (PBF) process to provide better material quality, finer features and handling of multiple materials, keeping the advantages of a direct product generation process, without additional sintering or annealing steps.

LASERFLEX *Conflux*

Freedom of design, complex shaping & high functionality



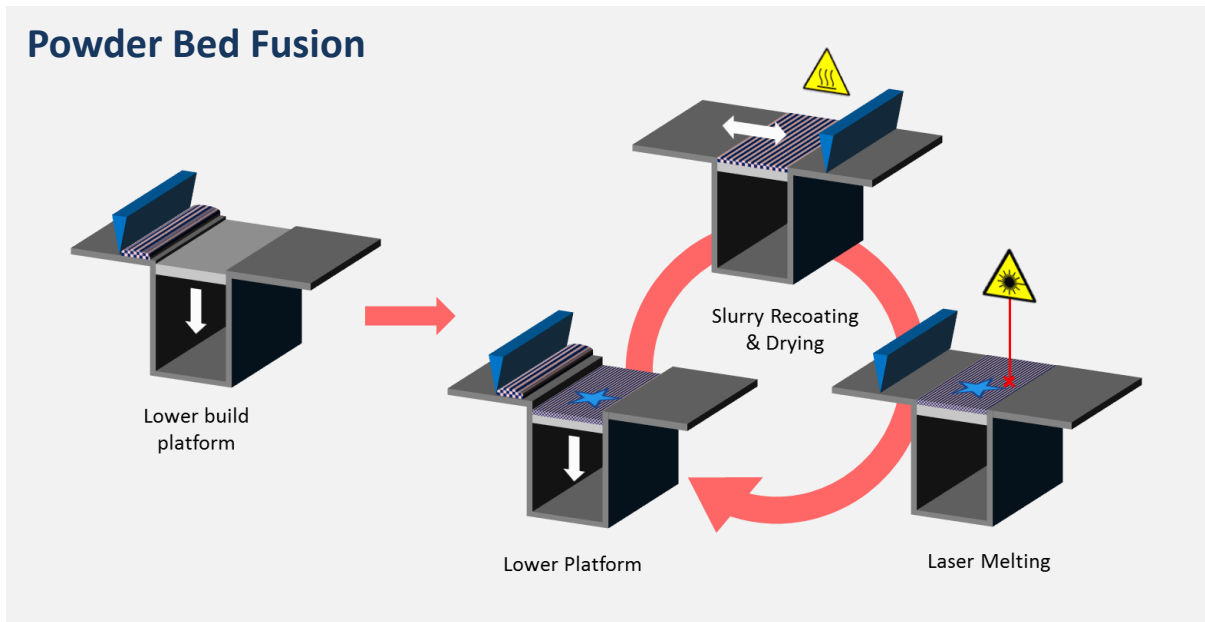
Specifications – LASERFLEX *Conflux*¹

Printing technology	Dispersed Metal Powder Bed Fusion ²
Build volume	Platform 100 mm x 100 mm x 100 mm Platform ø 100 mm x 100 mm
Layer thickness	10 – 100 μm
Focus diameter	50 μm typical
Laser type	Yb fiber laser 200 – 400W CW
Scanning speed	Up to 9 m/s
Materials	Stainless Steel 316L Inconel 625 Other materials under development
Atmosphere	Shielding gas – Nitrogen
Recoating system	Multi - Dispense system
Filtration	H13 – Cat. BIA-C
Software	ECN <i>Recoater+</i> software Scabs Samlight 3D or other on request

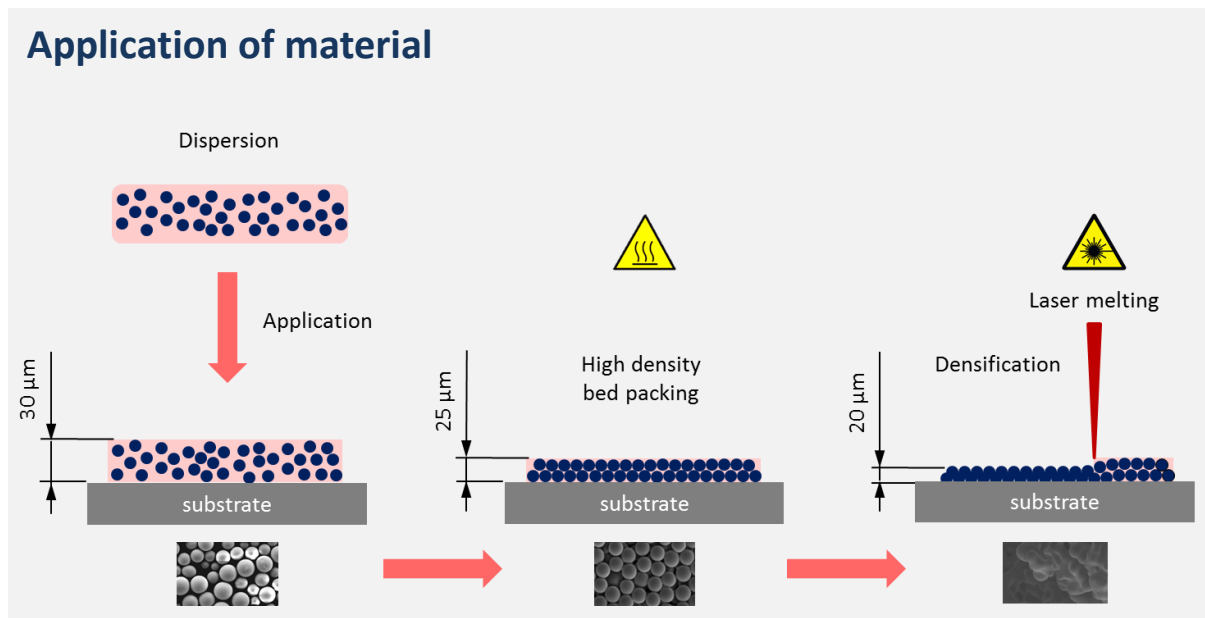
¹ Conflux / Confluence - Origin: <com-, together + fluere, to flow> The merger of rivers. To join, combine, or come together.

² Patent pending

The Liquid Dispersed Metal Powder Bed Fusion Process

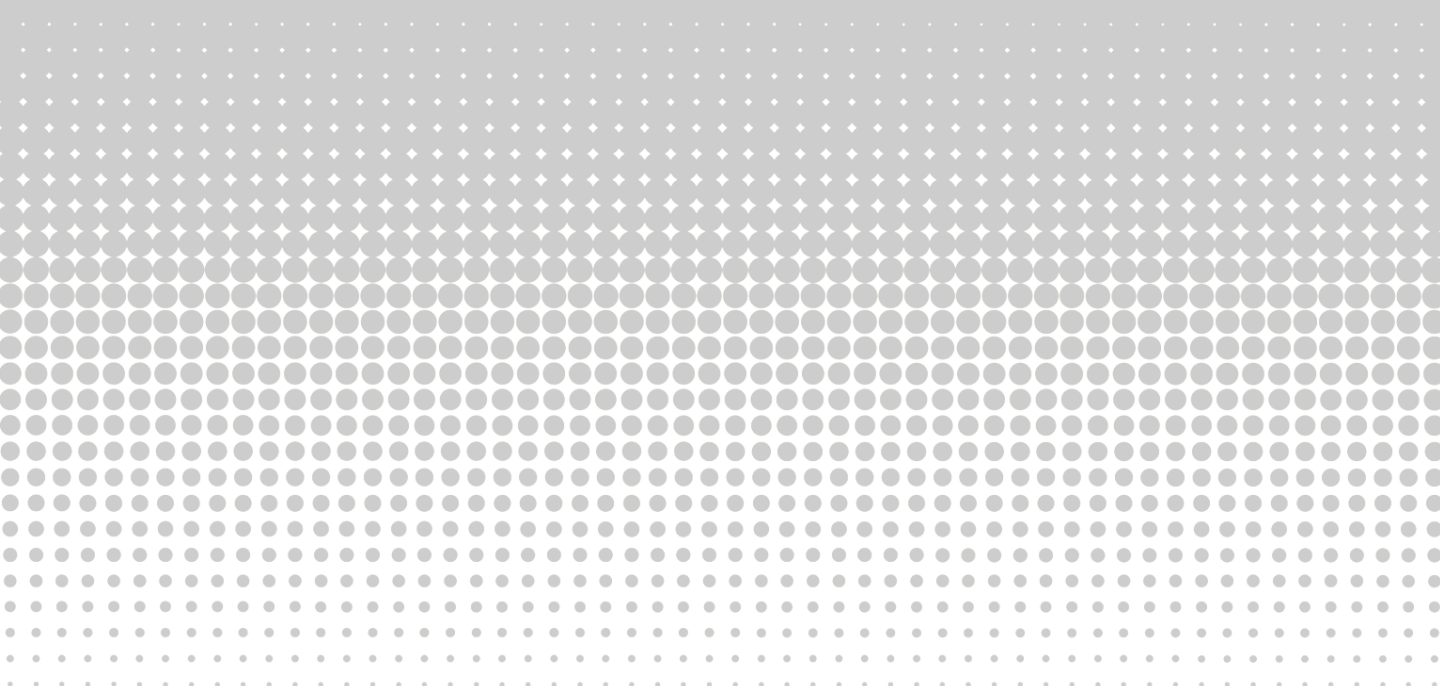


The conventional Powder Bed Fusion Process



Dispersion based application of metal powders

- Application of powders by multi dispensing system
- Densification of added layer
- Laser processing



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