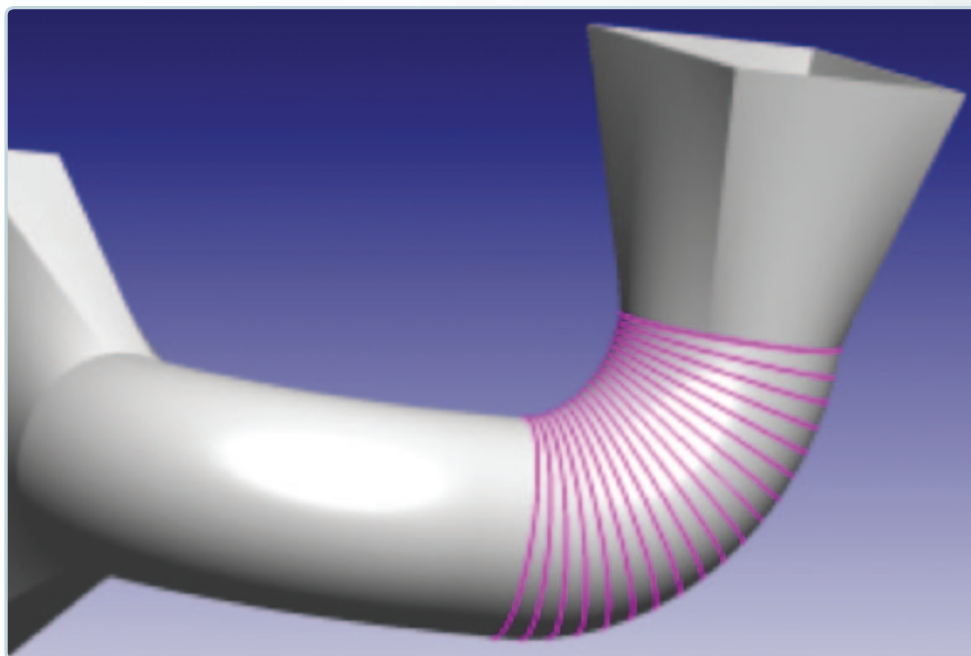


LENS™ SYSTEM TOOLPATH GENERATION

From 2 To 3 To 5 Axes – LENS Toolpaths Do It All

Optomec continues at the forefront of innovation in laser deposition, with new and improved methods to create toolpaths for a wide variety of applications. By teaming with industry leaders, Optomec is continuing to advance the state-of-the-art of laser deposition by providing efficient and accurate ways to generate toolpaths. With Keyence, we developed the LaserPath system – significantly reducing the time needed to generate multiple similar repair toolpaths. With Open Mind, we now have the capability to generate 5-axis toolpaths for the most demanding repair and part build applications. And with netfabb, STL file manipulation is quicker and easier than ever. Combined with our industry-leading Workstation Control and PartPrep software, Optomec's toolpath generation solutions continue to lead in ease-of-use and innovation.



THE CHALLENGES:

- ▶ Rapid Manufacturing from a 3D CAD model
- ▶ Repair of many similar aerospace components
- ▶ One-off repairs of machining defects
- ▶ Accurate volumetric repairs using 3D scanner data
- ▶ Multi-axis shaft repair

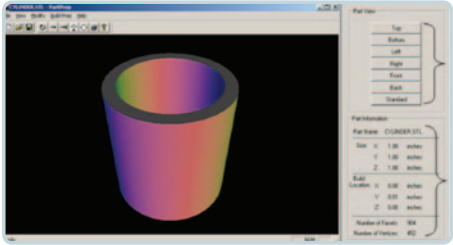
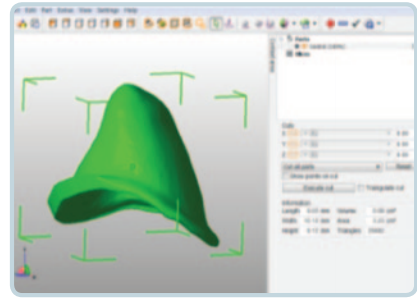
THE TOOLPATH SOLUTIONS:

- ▶ netfabb STL editing
- ▶ PartPrep slicing
- ▶ Teach-n-learn
- ▶ LaserPath™
- ▶ 5-axis Path Planning™

Which Method is Right for Me?

STL Model – PartPrep - Toolpath

Use an STL model if the volume to be deposited is defined by a CAD model and will not be adjusted part-to-part. LENS systems ship with the latest STL editing software – netfabb – and PartPrep, a robust STL-slicing package in use for 15 years. This method quickly and easily generates 2.5D toolpaths.

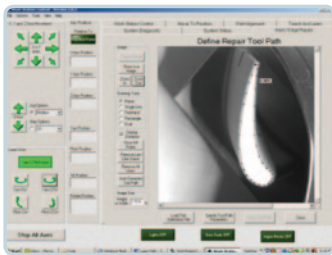
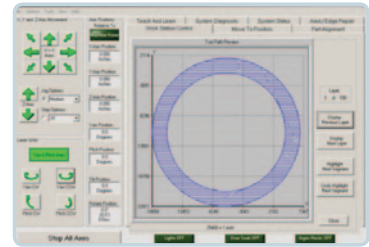


Point Cloud – PartPrep - Toolpath

Use a 3D scanner to generate a point cloud, and netfabb software to generate an STL model of the repair volume. Let PartPrep take it from there.

ChuckClad, TubeClad, ArcPath and more

Cladding a shaft? Building a thin wall? Simple, intuitive on-board software tools rapidly create a toolpath for repetitive operations.

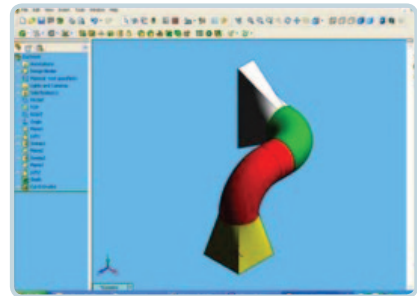


LaserPath™

Optomec's LaserPath system uses Keyence machine vision to recognize varying part shapes and create a toolpath to fit exactly.

5-Axis

Open Mind took their industry-leading 5-axis machining software and turned it inside-out! With the new laser interface, unleash the powerful capability to create full 5-axis toolpaths for the most complex repair and part build applications.



ABOUT OPTOMECC

Optomec® is the world leading provider of additive manufacturing systems for high-performance applications in the Electronics, Biomedical, Photovoltaic, and Aerospace & Defense markets. These systems utilize Optomec's patented Aerosol Jet Printed Electronics technology and LENS powder-metal fabrication technology.