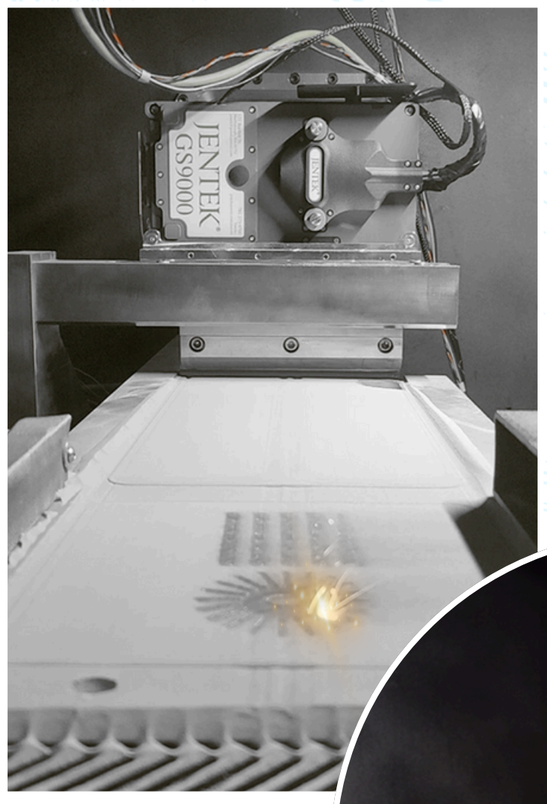
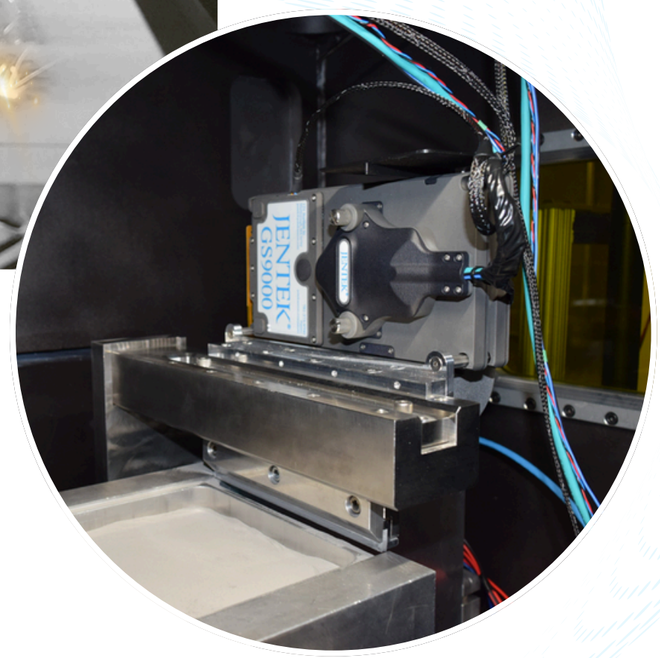
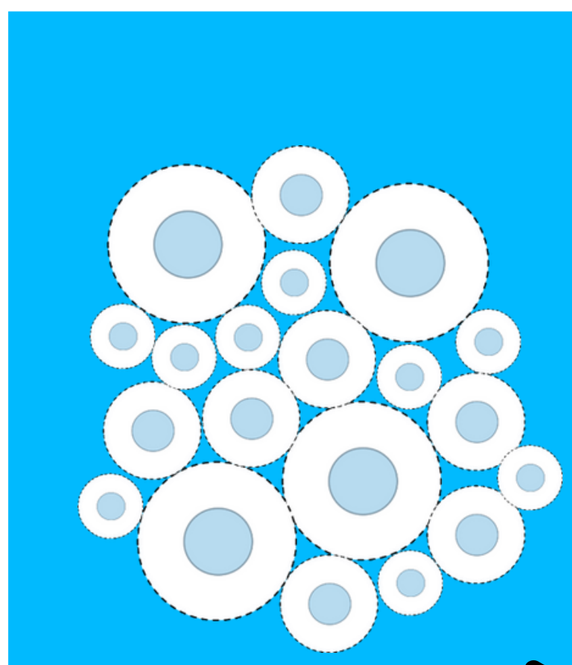
JENTEK® In-Situ Eddy Current Array Sensing

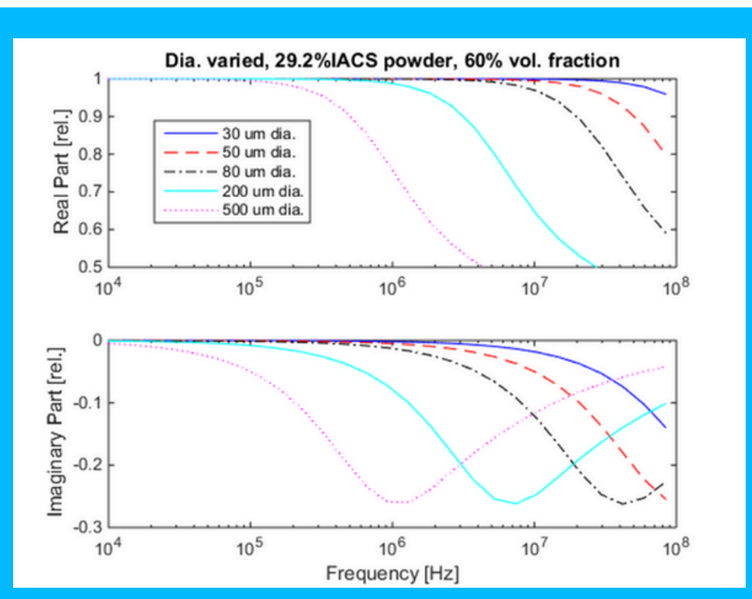
Laser Powder Bed Fusion (LPBF) Eddy Current Array Sensing

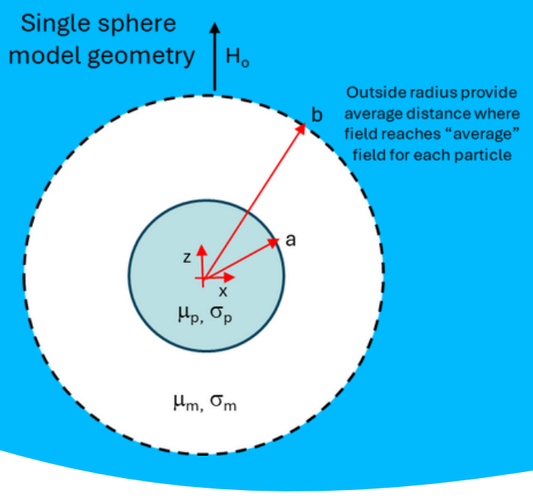




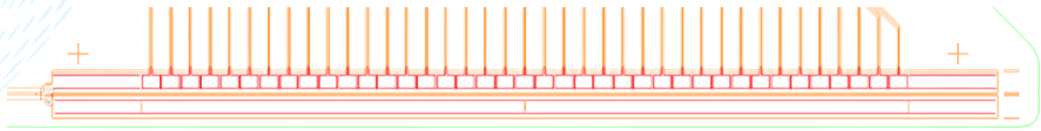
Powder Characterization and Modeling







MWM-Array®



In-situ eddy current sensing that keeps up with process speed

- *JENTEK GS9000® instrument installed on LPBF recoater*
- *No impact on build time*
- *Non-contact*
- *Simultaneous measurement of all channels at three frequencies*
- *Calibration performed in air or over the powder bed*

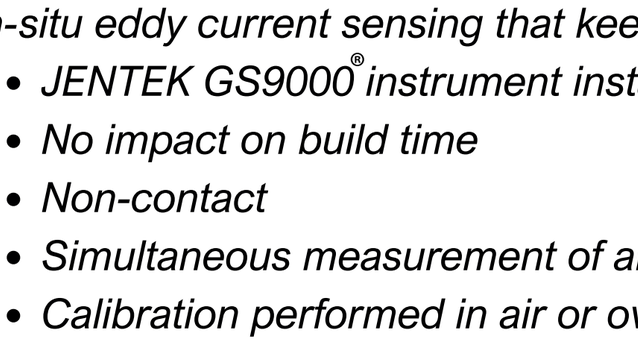
Identify defects, geometry, metallurgy during the build

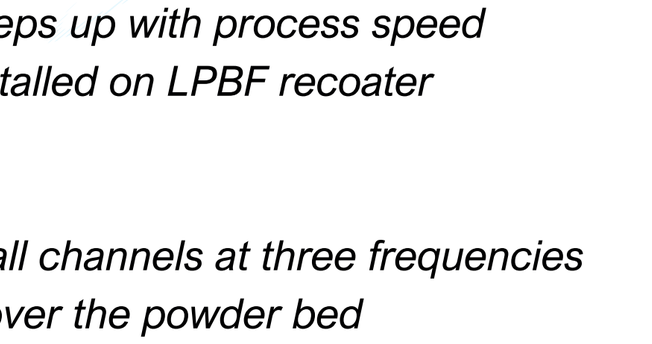
- *Detection up to eight sub-surface layers (40-50 micron layers)*
- *Parallel data enables refinement/sharpening of geometric images*

Stackable channel modules to increase width of scan

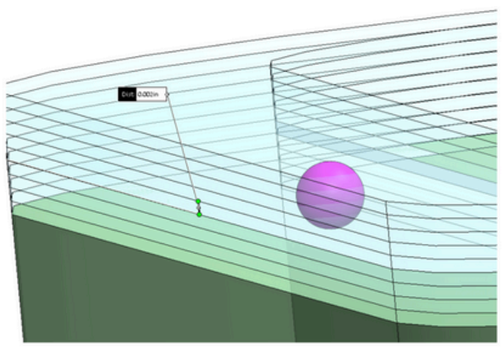
Minimal chamber modifications (required power and ethernet feedthrough)

Build Photo and 3D Rendering of Sensing Data

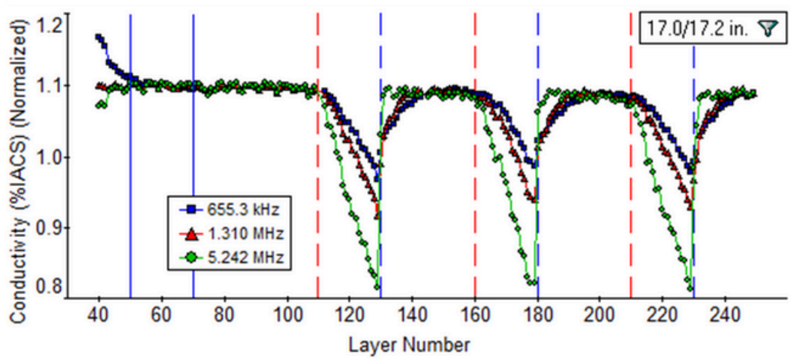




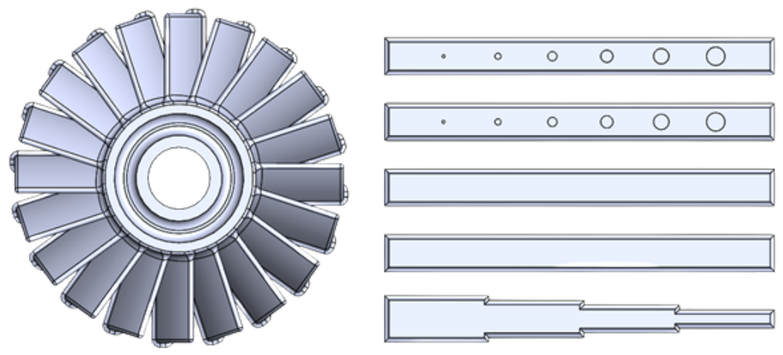
Patented Z-Directed Filtering



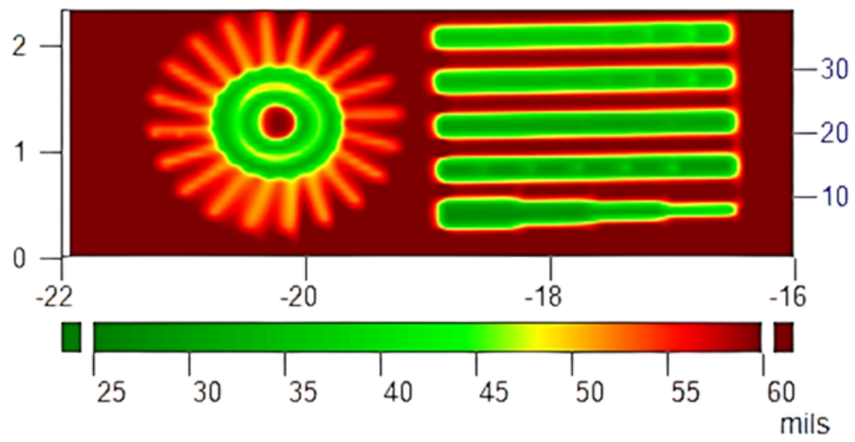
Data for the Three 800-Micron Voids in Build Direction



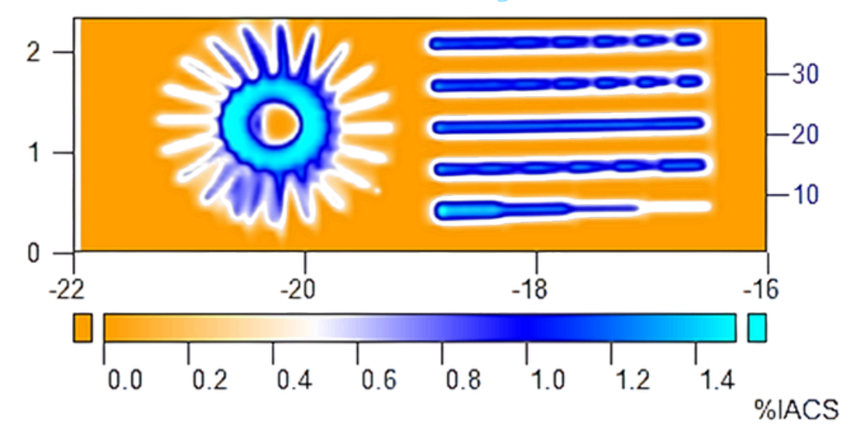
Build Model



Lift-off C-Scan



Conductivity Scan



617-373-9700 jentek@jenteksensors.com www.jenteksensors.com