



Yet Another Breakthrough Innovation in Metal 3D Printing

August 14, 2015

Dr. Ripi Singh

Chief Innovation Officer and Coach

www.InspiringNext.com, +1 (860) 816-4420, Ripi@Inspiringnext.com



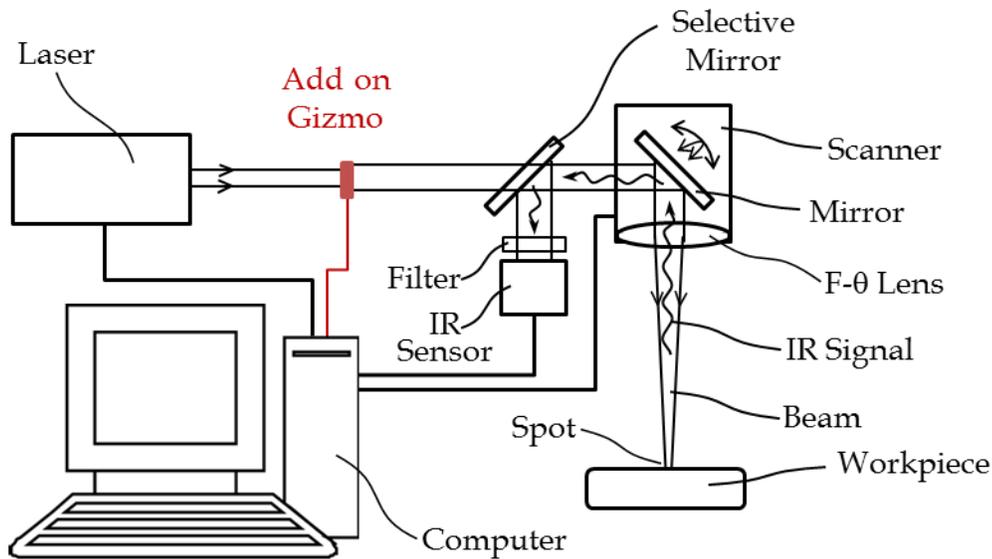
Every Developer of Additive Manufacturing machines is chasing three key discriminating parameters – speed, quality, and size; generally hard to accomplish all at the same time. One of my clients recently had a conceptual breakthrough, where a small optical gizmo retrofit will enable improved microstructure at faster speeds.

Standard laser beam technology provides non-uniform thermal profiles even for straight scanning paths at low velocities, making their application less than ideal for product uniformity, or for sensitive applications like production of single-crystal superalloy parts.

Advanced optics and matching simulation technology provide precision heating introduction, which assures uniform consolidation while reducing overtemp. This, and the ability to regulate the cooling rate permits faster processing speeds. The method is applicable to both powder-jet and powder-bed AM technologies at small incremental cost.

This is yet another innovation in a rapidly evolving (disrupting) technology, addressing the need for a fast, accurate, and reliable way to control the quality of additively manufactured metal parts.

In the spirit of LinkedIn, I would be happy to link up established equipment manufacturers with the inventor.



Schematic of Proprietary Optics added to a typical laser scanning system of a metal 3D printer.

About Ripi Singh

With 25 years in technology development, management, and leadership; Dr. Ripi Singh has learnt that Innovation, Productivity and Quality can be concurrently improved to reduce operational stress. He is now on an advisory and coaching mission to help businesses around the world, with his proprietary Innovation Framework called +4 π . It goes above and beyond the traditional initiatives such as six-sigma and lean.

He is natural at Strategic thinking, Innovative problem solving, Technology Commercialization, University-Industry relationships, and high performance team building. His people, process and technology leadership skills span across multiple domains - aerospace, defense, healthcare, energy, manufacturing, and IT. He holds a PhD in Engineering and Masters in Strategy and Innovation.

Feel free to connect / follow him on LinkedIn.