

Nikon and Materialise join forces for metal additive building process

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Nikon Corporation and Materialise join forces in a collaboration to provide customers more control, increased productivity, and reliability in metal additive manufacturing by developing an in-process monitoring and control system for the building process.

Materialise is a pioneer in 3D printing with a strong user base and contributes to industrialization through their open software platforms. Well-experienced in the field, Materialise has strengths in all aspects of 3D printing, and has built expertise in the additive manufacturing building process and process control.

Nikon strives to be a leading company in precision and optics technology and is working to establish a material processing business to create new markets and industries in the manufacturing field. This collaboration focuses on material processing and Nikon is conducting research on the visualization and control methods of the building processes of metal laser powder bed fusion.

While the additive manufacturing business is moving from prototyping to serial production, it is impeded by several issues. Instability in the metal building process is one of the obstacles that prevents industrialization on a massive scale. Resolving these instabilities and quality issues of printed parts requires an in-depth analysis of the process events and rigorous control of the manufacturing parameters.

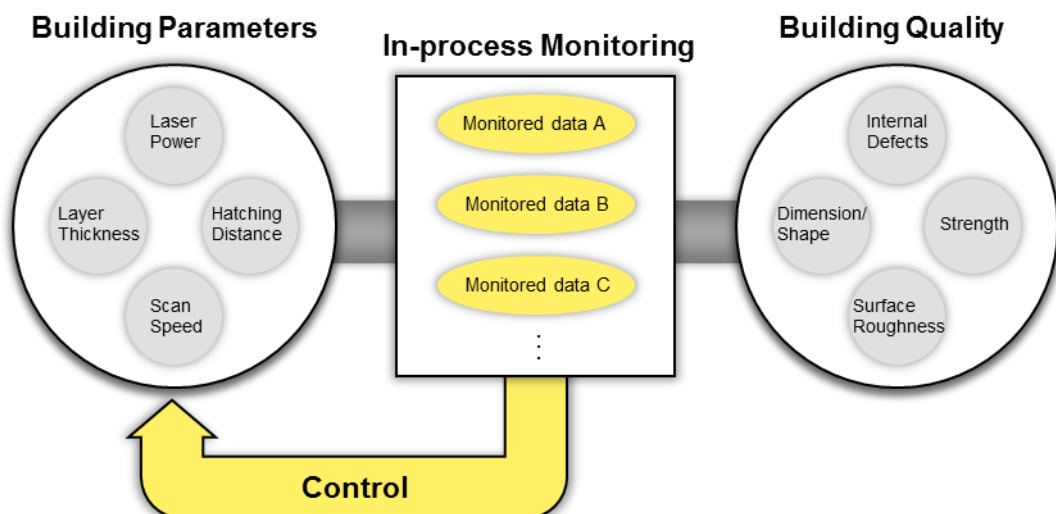


Figure: Concept of in-process monitoring and control system