

REVIEWED

- The temperature gradient in the depth direction is much higher than those in width and laser scanning directions since the heat transfer in the depth direction is greatly constrained by the low thermal conductivity of the powder layers.
- The addition of subsequent layers significantly affected the temperature gradient and the melting of previous layers. It only takes few milliseconds to melt the material and cool it to room temperature, which indicated the very fast heating and cooling cycles in SLM.

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