

Advanced Sinter-Bonding Solutions with MoldJet



Tritone

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CHALLENGE

Manufacturing separated parts and assembling them through sinter bonding is an advanced and innovative technique in additive manufacturing (AM). Sinter bonding is a solid-state joining process that involves fusing materials by heating them to a temperature below their melting point, allowing particles to bond through diffusion. Successful bonding requires uniform shrinkage of the parts and smooth interface surfaces to ensure optimal sintering.



SOLUTION

The MoldJet process enables the manufacturing of green parts with high strength and density, ensuring excellent mechanical stability throughout all stages of manufacturing. This stability allows for safe transportation, precise alignment, and seamless insertion into the sintering furnace, minimizing the risk of deformations or fractures. Together, these qualities form the optimal characteristics for sinter bonding.



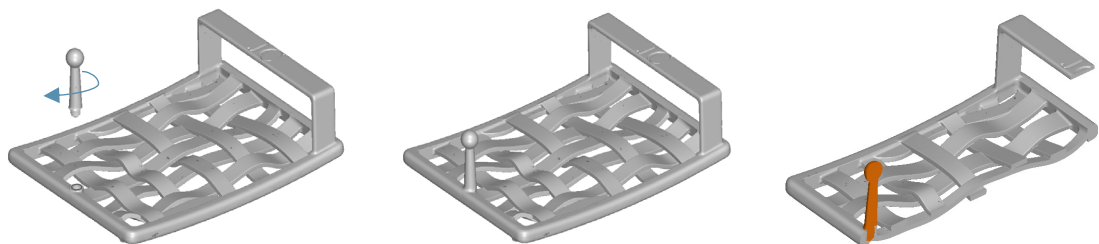
BENEFITS

The high quality of the parts ensures successful sinter bonding. This process expands design possibilities and enables advanced engineering solutions.



SUCCESS

- ▶ Sinter bonding of complex assemblies
- ▶ Manufacturing large parts and hollow structures
- ▶ Sinter bonding a component with an existing part made from the same material



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SUCCESS

The parts are manufactured separately; the pin is screwed into the part in the green state, and both are sintered together. During sintering, sinter bonding occurs, and at the end of the process, a homogeneously connected part is obtained.

