

Optimal Angles in Moldjet Technology



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CHALLENGE

Removal of layer line while achieving uniform surface finish on wall built along the Z axis at an As-Sintered state.



SOLUTION

A single geometry was manufactured in multiple angles along the Z axis. The angles started with 0° (parallel to the machine Scan axis) and ended with 90° (parallel to the machine Cross-Scan axis). The deviation between parts was 5° .

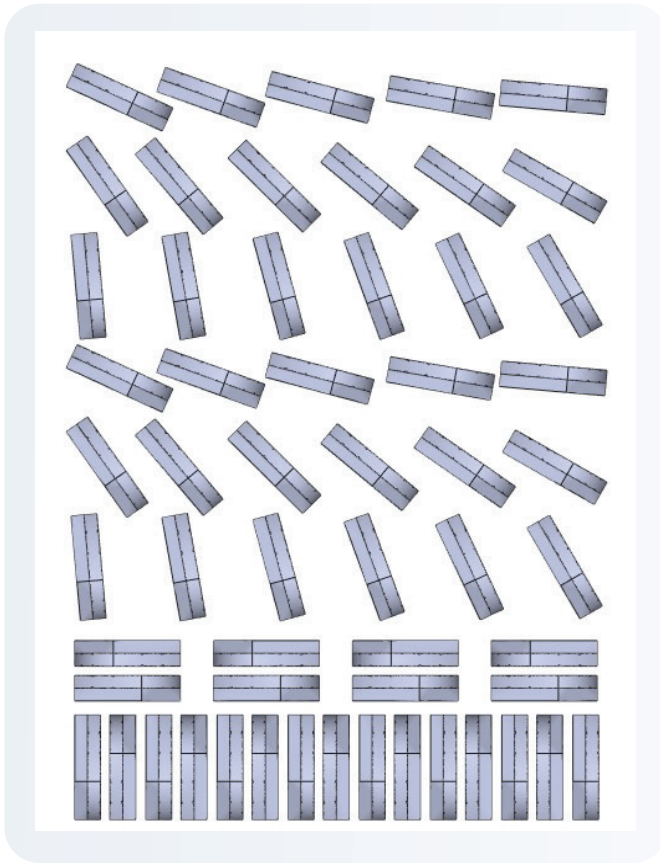


Figure 1: Top View of Test Tray



BENEFITS

Finding the optimal angle for walls being manufactured along the Z axis, will reduce the need for post processing to achieve a uniform finish. Reduces lead time.

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SUCCESS

- ▶ Optimal angle found to be between 20° and 35°
- ▶ Visual inspection indicated a more uniform finish of vertical walls
- ▶ Avoidance of unwanted layer lines



Figure 2: Comparison of 0° (left) to 35° (right) along Z axis