

Supplemented Material:

By changing the number of layers where the manufacturing direction is changed (n) the influence of the stresses on the distortion is clearly visible shown in **Figure S1**. Here the same binder system as used above had been utilized for alumina filaments. The twisting decreases when an alternating printing with $n=2$ (**Figure S1** right) is applied in comparison to $n=3$ (**Figure S1** middle).

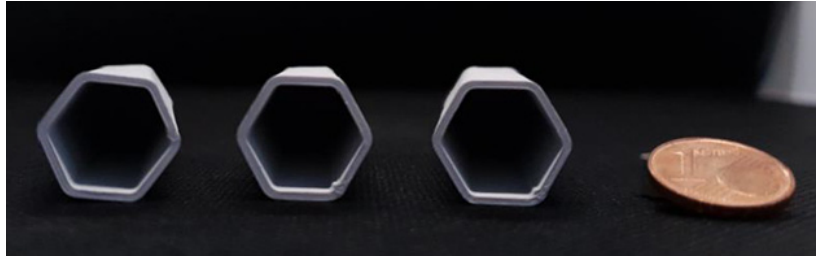


Figure S1. Left: counterclockwise; middle: $n=3$, right: $n=2$ solvent debindered Al_2O_3 hexagons, scale: 1 Euro cent (pictures courtesy: 3D Ceram Sinto Tiwari GmbH).

The Al_2O_3 (**Figure S1**) and the Stainless Steel 17-4PH part (**Figure S2**) made with a third-party filament shows the same effect after processing. It can therefore be assumed that other binders than those used in our investigation are also exhibiting similar effects leading to geometrical mismatch.

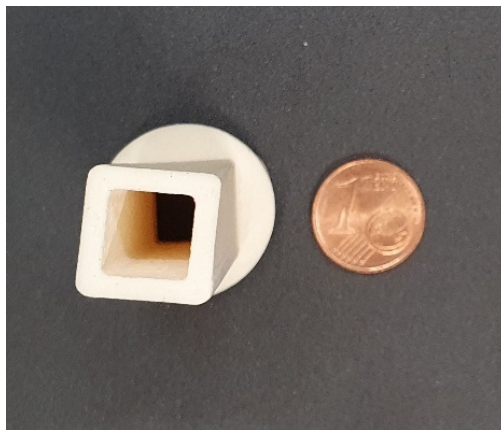


Figure S2. Deformed sintered alumina part, 2.5 mm wall thickness, 45 mm height (pictures courtesy: 3D Ceram Sinto Tiwari GmbH).

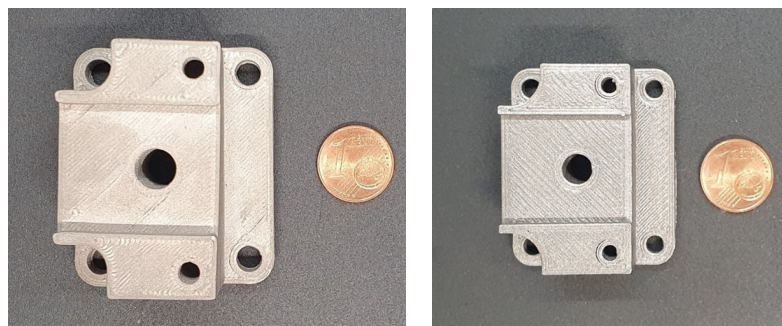


Figure S3. Left: sintered and twisted 17-4PH Stainless Steel part; right: deformed sintered Stainless Steel 17-4PH part (design courtesy: Space Structures GmbH, pictures courtesy: 3D Ceram Sinto Tiwari GmbH).