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## Controlling the Coating Microstructure on Axial Suspension Plasma Spray Process

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### Abstract

This study presents the elaboration of controlled microstructure of yttria stabilized zirconia (8YSZ) coatings by using an axial suspension plasma spraying (SPS) system. Several 8YSZ coatings were fabricated from porous to dense by using same starting feedstock powder via adjustment of the suspension concentration and the deposition distance. The microstructure control is strongly related to the flying droplet size and its momentum in front of the substrate surface. Both aspects significantly determine the

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