

Metallurgy Additive Manufacturing for Aerospace: Market Shares, Strategies, and Forecasts, Worldwide, 2017 to 2023

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Abstracts

Worldwide markets are poised to achieve continuing growth as the metallurgy additive manufacturing for aerospace decreases the cost of manufacture and increases efficiency in process. Lowering product manufacturing costs is a key benefit.

Additive manufacturing presents the opportunity to completely, rethink a product's design, transforming its functionality and reducing manufacturing complexity. This is a disruptive technology that is transformational. Aerospace companies and government programs are focusing on the advance of metal 3D printing for aerospace engine applications in 2017. Advances have been able to make commercial additive manufacturing a reality.

Aerospace and defense customers leverage 3D systems industry-leading solutions and expertise. Vendors seek to deliver productivity in increasing speed and reliability of quality assurance and validation processes, lowering fuel costs through light weighting and parts consolidation, and increasing manufacturing productivity through innovative 3D printed casting patterns, 3D data recovery, injection-mold design, and direct metal printing of airworthy parts.

According to Susan Eustis, lead author of the team that wrote the study, "Metal 3D printing is at its beginning stages. It is poised to grow to new levels in the aerospace industry and beyond. A key advantage of 3D printing is that it removes constraints found with traditional manufacturing, reducing cycle time and production costs. Manufacturing companies in various industries use FDM Technology and realize benefits." The global market for metallic additive manufacturing for aerospace at \$1.9 billion in 2016, \$2.2 billion in 2017 is forecast to reach \$20.9 billion by 2024. Market growth comes from the

economies of scale achieved by building metal parts in layers instead of using cutting. Coherent designs make a difference, fostering market growth. The metal parts are structural, making metal additive manufacturing a core business.

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