Additive manufacturing/ 3D metal printing Made better with the proper gas atmosphere

In the world of rapid prototyping and production of metal components it is imperative to have the proper, high-purity gas atmosphere to produce quality parts.

To meet the high-tolerance standards required in additive manufacturing, argon and nitrogen are commonly used to provide inert atmospheres. An inert atmosphere provides numerous benefits on a printed part by:

- Reducing oxidation of sintered parts by lowering the oxygen content during the printing process
- Improving safety through the inerting of combustible dust during powder handling and sieving
- Creating a stable printing environment by maintaining constant pressure in print chamber
- Mitigating powder clumping in feed tube
- Preventing part deformaties by controlling thermal stress through gradual cooling

Customer benefits

- Optimized part treatment via proper gas selection and purity
- Uniform printing as a result of maintaining consistent conditions
- Improved control over chamber management and post-printing heat treatment
- Lower production costs via reliable and cost efficient gas supply
- Easy installation
- Increased safety

Optimizing your production efficiency for today and tomorrow

Our Air Products technical team has extensive applications knowledge in surface/bulk treatment of metals to help additive manufacturers optimize the gas selection, supply mode, and purity for improved part processing.

Getting you up and running safely and efficiently is the first step, but our assistance doesn't stop there. Ongoing audits are essential to helping customers realize all the benefits of industrial gases in their operations. Our Air Products team has the experience to conduct process reviews and gas supply system sizing evaluations, as well as provide safety recommendations.

Depend on a worldwide leader

For 75 years, customers around the world have come to rely on Air Products' industrial gases, gas atmospheres, equipment and technical support to help improve product quality, reduce operating costs, and increase productivity. To learn more about how Air Products can help additive manufacturers optimize their 3D printing processes, visit: .airproducts.com/3Dprinting

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