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3D Printing: Air Liquide signs a contract in Italy with the Numanova start-up

Air Liquide has signed a multi-year contract with Italian start-up Numanova, a company of the Italeaf Group who specialise in the production of metal powders used as raw material in additive manufacturing or 3D printing.

With this contract, the Tier One company will supply up to six million Nm³ per annum of high purity, in liquid form for regasification, to the new production site of Numanova in Nera Montoro, Narni, Italy.

In powder metallurgy, Argon (Ar) is used as an inert process gas for the production and processing of high-quality metal powders and subsequently, in additive manufacturing in 3D printers, to protect powders from re-oxidation and to guarantee the best internal quality and outside of the molded parts.

“Numanova has the most advanced and robust gas-atomisation technology for the production of metal powders present on the international market today, based (fully operational) on N₂ plants with installed productivity up to 800t / year. The process consists in the pulverisation in very fine droplets of a controlled flow of molten metal, thanks to a high pressure Ar jet. By solidifying, the droplets form a highly spherical micrometric powder. Starting from these powder alloys, after a careful and rigorous screening process, certification and qualification of its product, Numanova is able to supply the market with a wide range of metal powders for the additive manufacturing of parts with complex geometries equipped with new functionality (for example, for the manufacture of prostheses in the biomedical sector, of turbine components in the aeronautical and energy sectors, in the luxury industry).”

In Europe, in addition to Numanova, other companies such as Erpro & Sprint, a company specialising in the additive manufacturing of prototypes and pre-series in France for the automotive, aerospace and medical sectors, Fada-Catec, the Center of Advanced Aerospace Technologies of Spain, and ADIRA-Metal Forming Solutions, which specializes in mechanical metal laser cutting equipment in Portugal, recently relied on Air Liquide’s expertise in this sector to accompany them in their development.

The additive manufacturing market transforms production methods thanks to a reduction in the development and manufacturing times of high value-added parts in all the mechanical sectors, in particular the aeronautics and space sectors.

Nicolas Poirot, Director of South West Europe of Air Liquide, commented, “*Air Liquide is well positioned to accompany its customers in the additive manufacturing market, a sector in full development. The Air Liquide teams are proud to accompany their customers in their development, being closer and closer to their needs.*”

Paolo Folgarait, General Manager and co-founder of NUMANOVA SpA, added, “*By combining the skills of Air Liquide with the technological know-how of Numanova, we are achieving very concrete results of great value. Numanova has found in Air Liquide a strategic partner that listens to its needs and is able to accompany it in long-term growth.*”