

# Mimete now offers nitrogen atomisation at its metal powder manufacturing facility

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Mimete SrL, a division of the Fomas Group, Osnago, Italy, reports that its manufacturing facility can now offer nitrogen as well as argon for the atomisation of metal powders. The company states that due to the increased demand for custom metal powders, and the potential technical advantages nitrogen offers, the decision was made to expand the manufacturing facility's capacity.

According to Mimete, a number of new alloys specifically developed in partnership with its customers, have revealed that manufacturing based on argon gas does not fulfil all the customer's technical requirements when compared with nitrogen gas.

Additionally, nitrogen gas is mandatory for some specific technologies and applications, as it provides the perfect chemical composition for the desired mechanical properties during the final stage. The manufacturing plant's lean design ensures, through a simple switch, a fully automatic changeover of the system, resulting in an elevated degree of efficiency and avoiding contamination.

In order to maintain the highest atomising performance, the VIGA (vacuum inert gas atomisation) automatically manages the different physical properties between the two gases. Mimete atomisation recipes are custom-made in order to deliver the distinctive properties of each gas (for instance, nitrogen bears lower specific weight and higher cooling capacity) and to achieve the best metal powder characteristics.

As both gases are inert, they are able to reach very low levels of oxidation in the molten and powder forms. Therefore, they can be equally employed in metal powder manufacturing. The company explains that argon is the gas of choice for manufacturing processes where high purity is required such as nickel superalloys. Nitrogen is preferred in steel manufacturing dedicated to Hot Isostatic Pressing consolidation as it is soluble in metal.

Andrea Tarabiono, Manufacturing Director of Mimete, commented, "The addition of nitrogen, as an alternative to argon, integrates our starting plant set up, giving us the opportunity to fulfil the specifications of new customers and introduce brand-new alloys that were not feasible before. With a lean process, switching from one gas to the other is simple and straightforward. Moreover, it results in zero contamination between the two gases and enhances our market response."

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