

# India breaks new ground with 1st ever titanium VAR furnace for aerospace manufacturing



Aerolloy Technologies, part of PTC Industries, has achieved a major milestone by commissioning India's first vacuum arc remelting (VAR) furnace for producing aerospace-grade titanium alloys. Located in Lucknow, this state-of-the-art facility, designed and engineered in Germany, has an impressive annual melting capacity of 1,500 tonnes and can produce titanium ingots with diameters up to 1,000 mm.

The VAR furnace operates under vacuum conditions, which is essential to achieve the high metallurgical quality required for advanced aerospace applications, such as jet engines and airframes. Jim Collins, CTO of PTC Industries, confirmed that the new facility adheres to global aerospace standards for titanium alloy production, making it a crucial asset for both the company and the nation. PTC Industries' Chairman, Sachin Agarwal, noted that the development marks a pivotal step in reducing India's dependence on imported titanium alloys, thereby advancing the country's aerospace capabilities.

In addition to this landmark achievement, PTC Industries is building a new manufacturing facility in the Uttar Pradesh Defence Industrial Corridor. This upcoming plant will include a fully integrated titanium and superalloy mill, designed to produce a range of aerospace-grade products, including ingots, billets, bars, plates, and sheets. This strategic expansion is aimed at strengthening India's position in the global aerospace supply chain while aligning with the government's "Make in India" initiative.

With the commissioning of the VAR furnace, India now joins an elite group of countries, including the United States, Russia, China, France, and the UK, in possessing the capability to produce aerospace-grade titanium alloys domestically. This move significantly boosts India's self-reliance in critical aerospace materials, allowing local manufacturers to meet the increasing demand for high-performance alloys in the growing aerospace sector.

By reducing its reliance on foreign suppliers, India not only strengthens its aerospace manufacturing capabilities but also enhances its competitiveness in the global market. This development is set to play a crucial role in boosting India's aerospace sector and its potential as a major player in the international manufacturing landscape.