

New geometry for machining aero materials

ATI Stellram has unveiled a new geometry for machining challenging aerospace materials such as titanium alloys. The 48 geometry offers better chip formation and ejection thanks to its high helix features and double positive top rake configuration, achieved via strong primary and secondary cutting edges.

The design allows more contact time between chip and cutting edge, ensuring longer tool life and greater component accuracy. ATI Stellram adds that this innovative combination generates lower radial forces and minimises vibration, thereby allowing the machining of components in more unstable cutting environments.

The 48 geometry is available in grades SP6519, a tough, high-performance substrate which is finished with the latest generation, hard-wearing PVD super nano coating, and the industry-proven X500 which is part of the X-Grade™ Technology program for difficult-to-machine material applications. The new insert program is suitable for machining stainless steels, as well as high-nickel, high-cobalt alloys and iron-based alloys, and comprises ADET12 and APET16 style inserts with either facet or a comprehensive range of radii from 0.8mm to 6.4mm.

Later this year, ATI Stellram is set to launch two new inserts, ideal for profiling applications, which are designed to complete its turning programme. The new geometries have been developed to overcome problems such as low metal removal rates and shorter tool life that are typically associated with difficult-to-machine materials, in particular nickel-based alloys.

Correct edge preparation is assured as these inserts will be produced in a new grade featuring a heavy-duty PVD coating and high-quality micrograin substrate. Impressive results from a series of customer trials have already shown that the new geometries achieve better chip control, higher metal removal rates and longer tool life during roughing and finishing operations, stated Ivano Migliore, ATI Stellram's European turning manager.

ATI Stellram will share its know-how on the latest techniques for machining titanium alloys when it hosts six roadshows around the UK in conjunction with NCMT, Makino's exclusive UK machining centre agent. The events will be held in Poole, Basildon, Nottingham, Preston, Glasgow and Belfast in March and April. Further details can be obtained from John Bannister on 01225 897100.

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