

TITAL® - NEWS-FLASH

TITAL has received an award at the "International Casting Contest". The world-wide contest is announced every year by the Investment Casting Institute and evaluates casting components with regard to complexity and quality. TITAL achieved a top ranking with a casting for the tail rotor of a helicopter made from aluminum A357 (22" x 24" x 18"). TITAL was able to prove that the component achieved a higher quality, lower weight and lower reject rates when produced using the HERO-Premium-Casting® process than when produced as a sand casting.

TITAL® - STATEMENT

Why do engineers avoid the conversion to titanium casting parts? Michael Kersting, sales manager at TITAL:



"In order to use the investment casting process it is necessary

to invest in tooling which is necessary in the conversion to investment casting. But usually the fixed costs are overestimated compared to the cost savings, depending on the batch size the conversion is paid off within one year. The investment for casting tooling differs greatly depending on the complexity of the component. Especially the cost for titanium, where castings are amortized rapidly as the loss of material is close to zero."

More cost-efficient: Why titanium investment castings are the better solution

Over the past years the investment casting specialist TITAL from Bestwig was able to convert many titanium components for its clients into titanium investment castings. Previously the components were machined from solid material. For example, the castings for the Eurofighter which is assembled at BAE SYSTEMS in England and the Airbus in Toulouse, TITAL proved that titanium investment castings are more economical than machined parts. According to Michael Kersting, sales manager at TITAL, the "mind-set" of the customers engineers is critical for a successful conversion. To broaden the horizon of the development engineer is the most difficult process for TITAL. "About four years ago we successfully converted a 28" lever which opens the wheel well of the Eurofighter from a machined part to an investment casting. That's when the development



Preferred: Titanium castings for Airbus.

started. Now BAE SYSTEMS is driving casting conversions on their own", says Kersting. At the Airbus Toulouse facility at the Saint Eloi plant, titanium castings are preferred as well. In Saint Eloi the pylons (connections between the engine and the wing) for all Airbus models are developed, produced and assembled. According to TITAL key account manager for Airbus, Thomas Stephan, "Due to the

good experience with titanium investment castings, the cost for the machined parts is analyzed over and over again by their own Design to Cost teams." Thus new areas for titanium investment applications emerge. Currently 25 different pylon parts for the A400M pylon have been converted into investment castings with reduced costs as well as part weight.

TITAL granted a patented license to Japan

TITAL has granted a license for its patented HERO-Premium-Casting® process to a Japanese partner, NIDAK Seimitsu Corporation in Soma City. NIDAK Seimitsu can offer a production back-up in Europe to its Japanese clients and TITAL has got a domestic partner to work the Japanese market. NIDAK Seimitsu also serves as a distribution part-

ner in Japan for TITAL's titanium investment castings. Both companies primarily supply customers in the aerospace industry. The HERO-Premium-Casting® process was developed at TITAL in the 90s by a five member engineer team. By using this process it is possible to avoid all types of casting shrink and internal casting defects (small

spaces which occur between the molten material and the solid metal during the production process). The superior quality and above average mechanical properties of castings produced by the HERO-Premium-Casting® process allows them to compete directly with forgings and machined products.