



EFFICIENT OFFLINE PROGRAMMING OF TRUMPF MACHINES FOR 3D LASER CUTTING

CNC Stanz- und Lasertechnik (Stamping and Laser Technology) uses state-of-the-art CNC machines – mostly manufactured by TRUMPF – to make prototype and series production components. For more than a decade, CNC Stanz- und Lasertechnik has relied on CENIT software to program its complex 3D components. In the field of 3D laser cutting, CENIT's 3D offline programming system FASTTRIM ensures that high quality targets and short deadlines can be met consistently.

For more than 20 years, CNC Stanz- und Lasertechnik has been a reliable partner in the field of sheet metal processing for prototype and series production components. The Ilsfeld-based enterprise covers the full range of sheet metal manufacturing. Many years of know-how in 2D and 3D laser cutting, water jet cutting, stamping, edging, welding / laser welding as well as 2D and 3D milling ensure short delivery times and maximum component precision and quality. For its 3D laser cutting work, the company relies on machinery by TRUMPF.

A long-standing CENIT customer, CNC Stanz- und Lasertechnik switched to FASTTRIM in late 2006. FASTTRIM offers CATIA V5-integrated offline programming for 3D laser cutting.

„The reason for the change was our goal of always working with the latest technology“, explains Mr. Hinderer, Project and Product Manager, CAM 3D. Thanks to CENIT's competent support, the transition only took a few

So the decision in favor of CATIA V5 and FASTTRIM was a good one. FASTTRIM's integrated Fixture Builder feature alone made for an enormous reduction in terms of customization work. The system's

“Since we started working with FASTTRIM, we're seen a major reduction in our customization work. In a pinch, we can process a prototype order within a single day.”

**Dietmar Hinderer,
Project and Product Manager, CAM 3D**

weeks. The engineers had to acquaint themselves with many new functionalities and approaches. „Of course it wasn't all easy in the beginning. But we quickly realized what advantages the new methodology offered“, Mr. Hinderer says.

associative and parametric approach ensures quick generation of plug-and-connector elements. In the event of a design change, the existing elements can be adjusted with ease. Thus all plug-and-connector components can be created rapidly. Highly convenient, mostly automated functions guarantee



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spot-on, secure positioning of components. „We're also very pleased with the fact that we can easily install oblique supports. That lets us handle some components even better“, adds Mr. Ehmer, likewise Project and Product Manager, CAM 3D.

CNC Stanz- und Lasertechnik usually receives the component data it needs for programming purposes from its customers, in CATIA V5 format. The component data often includes trimming contours, but even without such information, FASTTRIM can generate all required contours via its comfortable and intelligent contour search option. From these contours, the user can very quickly generate the laser paths including all machine positions, approach and disengagement paths, as well as other technology specifications. Any component or contour changes can be quickly integrated into the existing programming task using FASTTRIM's practical approaches, which avoids time-intensive re-programming. Full replicability of processes, a must for any certified enterprise, is also guaranteed at all times.

CNC Stanz- und Lasertechnik develops the programs for its three-shift operation of the TLC1005 laser facility manufactured by TRUMPF. The TLC 1005 is additionally equipped with an A-axis for tube cutting, as needed e.g. when making components for an automotive roll cage. Before any program is transferred to the machine, it is validated by in-depth machine simulation. Potential collisions and machining head settings are examined carefully. „The simulation also lets us see which laser head – the 5“ or the 7.5“ head – is better suited for the purpose at hand. Depending on the number of units, we can achieve far shorter manufacturing times by selecting the right head“, says Mr. Hinderer. „And because our programs are simulation-validated, we can run them in very quickly. There's not really any need for re-teaching.“

FASTTRIM has significantly boosted CNC Stanz- und Lasertechnik's competitiveness. The combination of innovative machine concepts and high-performance offline programming ensures short delivery times and, most importantly, compelling quality.

► PROFILE CENIT AG

CENIT AG has been a consultancy and software specialist for the optimization of business processes in Product Lifecycle Management, Enterprise Information Management, Application Management Services and Business Optimization & Analytics since 1988. CENIT currently has over 720 employees world-wide and its customers include Allianz, BMW, Daimler, EADS Airbus, LBS, Metro, AXA and VW. A large number of customers are medium-sized enterprises, particularly in the financial services, automotive and mechanical engineering sectors, such as Dürr, ISE and Emil Bucher.

CENIT is headquartered in Germany (Stuttgart), where it is present in all the major cities. It also has a branch near Detroit to cater for the American market. CENIT is also represented in Switzerland and since 2006 in Romania. With the foundation of another subsidiary in Toulouse CENIT stresses its reputation in the aerospace industry. The internationality of CENIT's business gains more importance with a further consistent expansion of these subsidiaries.

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