

LASER TRIMMING OF PROTOTYPE COMPONENTS: THE FORMULA FOR SUCCESS

Many prototype components, short deadlines and strict quality demands – when you're faced with all these at the same time, you need a very efficient solution. CONCAD GmbH relies on FASTTRIM – a sophisticated offline programming system for 3D laser beam trimming.

For large-scale prototype projects – spatially and quantitatively – CONCAD GmbH is a well-established, reliable and flexible development partner for the vehicle construction industry. Making unusual ideas take shape – that's the guiding principle of CONCAD's work, from the conceptual phase to series production. The company's portfolio covers design, tooling, model and mold construction, as well as low-volume production. Due to the physical proximity to and the excellent contacts with Prima Industries and the many years of experience with using their systems, CONCAD relies exclusively on Prima laser trimmers. Two Prima Optimos and one Rapido, to be precise. The challenge is to program these machines to work at maximum efficiency.

In the course of its ongoing modernization efforts, CONCAD moved from CA-

TIA V4 to V5 in 2007. Related to this was a switch from the tried and proven, CATIA V4-integrated LASERCUT software to the CATIA V5-integrated

one-week training course conducted by CENIT, they were up and running, programming independently. After just two weeks, V5 was already working

“ FASTTRIM is a system that I work well with, and that I really enjoy using.”

Michael Weimar
FASTTRIM User

FASTTRIM system, also provided by CENIT AG. „We ran benchmark tests on a number of systems,“ says Stefan Breunig from CONCAD GmbH's management team, „but we became convinced that only FASTTRIM could let us achieve our new, ambitious efficiency goals. And today we know we made the right decision.“

The switch from V4 to V5 was simple, despite initial skepticism on the part of CONCAD staff. For the users, everything was new and challenging. They had to learn a whole new approach to programming. After a

productively. „With CENIT, we have a highly competent point of contact for any questions that may arise“ says Mr. Weimar, a FASTTRIM user. „They know and understand what we need. They have an uncomplicated approach to our queries, and to the solutions too.“

The manufacture of prototype components is usually a step-by-step process. Components often have to be pre-trimmed, re-trimmed and trim-finished. Additionally, the components are constantly evolving. That's why FASTTRIM has to have particularly strong



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features in this field. The integration with CATIA V5 greatly simplifies the handling of development data. „All we get from our designers is CATIA data – that’s what auto designers usually work with. In all other cases, we rely on the high-performance interfaces“, says Mr. Weimar.

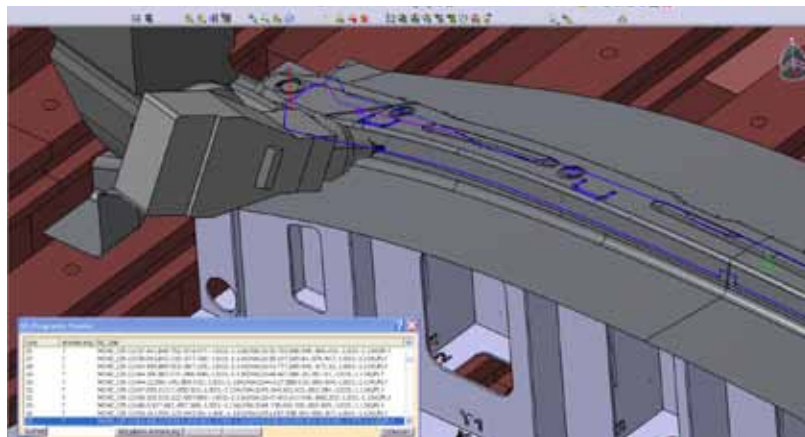
The devices required for trimming the prototype components are created using FASTTRIM’s Fixture Builder. The system’s associative and parametric approach ensures rapid generation of the fixture elements. In the event of design changes, an existing fixture element can be adapted quickly.

The trimming components are programmed by way of a customized FASTTRIM default template. The trimming data is supplied by the designers, who also provide component, mounting, and measurement data.

From these contours, FASTTRIM users can quickly generate the laser paths including all settings, approach and disengagement paths as well as other technical event information. Manufacturing know-how can be injected at any time, e.g. when dealing with tricky contour sections of bent flanges. The laser’s orientation can be individually adjusted at any point. „Since we have a lot of short-term trimming changes, we really appreciate the comfortable integration of changes in FASTTRIM“, says Mr. Weimar. „That way, we don’t have to reprogram components from scratch – some of them need 25 hours of programming work. Instead, we just enter the change.“ Thanks to the highly structured overall approach of CATIA, changes in FASTTRIM are also easily replicable – a truly helpful feature, particularly in shift-work programming. CONCAD is similarly pleased with FASTTRIM when they need to

make laser path corrections, e.g. precise path offset changes or handling of small, unfinished lands.

The decision in favor of a CATIA V5-integrated approach earned CONCAD an efficiency boost. Due to CENIT’s fine-tuned FASTTRIM solution and competent all-round support, the company has experienced a sustained increase in competitiveness. Tight deadline, strict quality demands? Consider it done.



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