

CENIT at the EuroBLECH 2018

## **3D simulation software FASTSUITE from CENIT masters all complex processes in sheet metal processing**

**Stuttgart, August 29, 2018 - Whether arc and spot welding, path welding, roller hemming, 3D laser cutting or painting - the 3D simulation platform FASTSUITE Edition 2 from CENIT masters all complex processes in sheet metal processing. The enormous efficiency and time advantages of the software with its powerful and convenient functions for offline programming compared to conventional methods of online programming will be explained by the CENIT team at the EuroBLECH 2018 from October 23<sup>rd</sup> through 26<sup>th</sup> in Hanover by using an arc welding robot cell from FANUC. Industrial robots significantly increase production possibilities, flexibility and productivity in laser welding. But this potential can only be fully exploited with offline programming.**

FASTSUITE Edition 2 no longer programs the machine or robot. Instead, the robot path and the machining program are generated directly from the CAD data - with all the exact parameters for the respective production technology. It does not matter whether material is applied, transported or removed. The FASTSUITE Edition 2 optimally supports laser welding and other manufacturing technologies in sheet metal processing and ensures great progress in plant availability, efficiency and competitiveness.

### **Technology packages facilitate offline programming**

So-called technology packages facilitate semantic and vendor-neutral robot programming. These packages not only support the process-specific structure of robot tracks, but also automatically define all process parameters and control commands. In this way, FASTSUITE Edition 2 ensures consistently high program quality - regardless of the robot type used or the programming experience of the user. As a manufacturer-independent software provider, CENIT offers interfaces to all common robot and system manufacturers whose proprietary systems can be integrated into the 3D programming and simulation platform as virtual controllers. Despite this performance and the comprehensive simulation of all plant components and processes, the system is so simple and intuitive to operate that even inexperienced operators can generally use the program package without problems after a three-day training course by CENIT. At the CENIT stand, offline programming will be demonstrated using various technologies, such as laser welding, roller hemming, path welding, 3D laser cutting or spot welding.

## **Tried and tested solution**

In practice, the FASTSUITE Edition 2 has already shown what it can do for a whole series of well-known customers and manufacturers. In conjunction with FANUC robots and their controls FANUC RoboGuide, the solution supports extensive parametric welding strategies and methods and adaptive processes such as measuring the position of components or seam tracking. The FANUC RoboGuide is connected to FASTSUITE Edition 2 as a virtual controller to obtain an even more realistic simulation. Together with robots from KAWASAKI, Reis, Yaskawa, Jenoptik or KUKA, FASTSUITE has already proven itself as a perfectly coordinated 3D layout and simulation platform.

The Leonberg system integrator HAIMERL Lasertechnik relies on FASTSUITE Edition 2 for the construction of laser welding systems, using all functions for the complete process - from the import of component and fixture data via offline programming (OLP), simulation and optimization to the error-free import of programs onto the real system. In this way, optimum process results are achieved immediately. As a rule, re-teaching on the system is no longer necessary; the exact design of the devices and components ensures ideal conditions for safe operation.

The forklift manufacturer CROWN also uses the software in its production facility in Roding in Upper Palatinate for its robot welding systems. And all this with excellent results: CROWN has, in its own opinion, achieved a great deal for robot welding efficiency. Instead of several days, programming a new workpiece or a new part variant takes only a few hours. Because the programming is done in the simulation environment of FASTSUITE Edition 2, i.e. parallel to the productive operation of the plant, the downtimes of the plant have been considerably reduced. The production interruption for setting up and teaching new components is reduced to a minimum and the quality of the welds on the solid steel parts is very good throughout.

## **Support of upstream and downstream steps expanded**

While the earlier program versions focused primarily on offline programming of the controllers, CENIT has massively expanded the functions for the upstream and downstream steps with the current generation. This begins with the import of CAD data from production and assembly sequence planning as the basis for the production layout. Here, FASTSUITE Edition 2 accelerates plant design with predefined simulation components in the form of mechatronic models. If project-specific components are not included in the supplied library, they can be loaded as "smart components" from the extremely extensive 3D manufacturer catalogs of PartSolutions via a direct connection to CADENAS PartSolutions and used immediately in the simulation.

## **Tests and optimization without the actual plant**

The layout, offline programming and virtual integration of manufacturer-specific controls create a complete mechatronic plant model that can be used as a

simulation environment directly for PLC (Programmable Logic Controller) validation and virtual commissioning. The virtual system behaves identically to the real hardware - including all I/O signals or sensor data. This means that the control software can be tested and optimized absolutely reliably in an early project phase, even though the real system has not yet been set up. This has two key advantages: the project time for plant construction is drastically reduced, and possible errors can be detected and corrected with virtual commissioning even before the actual plant is set up. All this makes the software a very interesting solution for system integrators as well: they can not only make their customers' systems ready for production much faster, but also inform them transparently and vividly about the planned structure in all planning phases.

This year, CENIT will be in hall 13 at stand G34 at the EuroBLECH 2018, which will take place from October 23<sup>rd</sup> to 26<sup>th</sup> in Hanover.

For more information, please visit

[http://www.fastsuite.com/en\\_EN/technologies/welding.html](http://www.fastsuite.com/en_EN/technologies/welding.html)

[http://www.fastsuite.com/en\\_EN/products/offline-programming.html](http://www.fastsuite.com/en_EN/products/offline-programming.html)

#### **CENIT in the social media**

[www.linkedin.com/company/cenit](http://www.linkedin.com/company/cenit)

[www.twitter.com/cenitag](http://www.twitter.com/cenitag)

[www.xing.com/companies/cenitag/updates](http://www.xing.com/companies/cenitag/updates)

[www.facebook.com/CENITAG](http://www.facebook.com/CENITAG)

#### **FASTSUITE in the social media**

<https://www.youtube.com/FASTSUITE>

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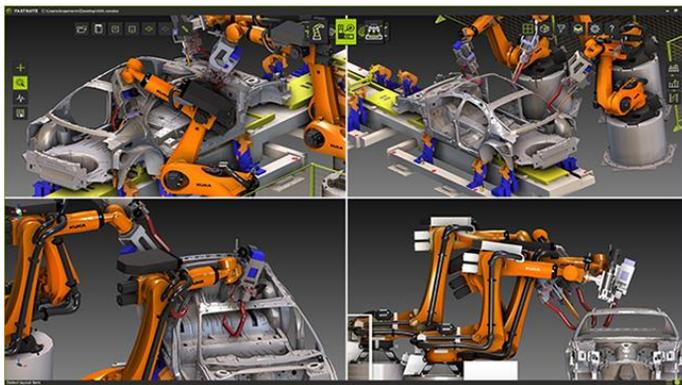
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Welding with FASTSUITE

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Body in White Technology: Spot Welding with FASTSUITE and KUKA robots.

## About CENIT

CENIT is the partner for successful digital transformation. With CENIT at their side, customers have extensive possibilities for optimizing their horizontal and vertical business processes. Innovative technologies from the areas of Product Lifecycle Management, Digital Factory and Enterprise Information Management create the basis for this. The competence of CENIT consultants is the result of a combination of interdisciplinary process understanding and in-depth specialist expertise. The integrated consulting approach gives CENIT customers the certainty that their solutions are created with an understanding of their entire value chain. As an integrated partner to its customers, CENIT assumes responsibility for everything from consulting and the introduction of innovative IT solutions to cost-effective operation. The CENIT team adapts to the specific situation of the company and thus guarantees the practical approach that makes measurable operational optimizations possible in the first place. CENIT has been realizing competitive advantages for well-known customers in key industries of the economy for 30 years. CENIT employs around 800 people who serve customers worldwide in the automotive, aerospace, mechanical engineering, tool and mold making, financial services, retail and consumer goods sectors. [www.cenit.com](http://www.cenit.com)