Blechexpo/Schweisstec 2023

"best award" presented in five categories

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There were beaming faces on the first day of the Blechexpo/Schweisstec trade fair duo: this year's "best award" honoured the highlights of the trade fair.


The winners of the "best award" 2023!
(Image: Jürgen Biniasch)

The trade magazines Blechnet and MM Maschinenmarkt, together with trade fair organiser Schall, were looking for the most innovative products, solutions and digitalisation concepts in five categories at the Blechexpo/Schweisstec trade fair duo. Over 60 participating companies applied for the award.

After the jury, consisting of Edgar Grundler, representative of the trade fair organiser Schall, Stefanie Wiesner, representative of the German Electrical and Electronic Manufacturers' Association (ZVEI), Robin Kurth, representative of the R&D department, Fraunhofer-IWU, Florian Kellner and Philipp Leinhäupl, representatives of the application department, Siemens Gerätewerk Amberg, and Frauke Finus, representative of the trade magazines Blechnet and MM Maschinenmarkt, had selected the

shortlists for the individual categories ([read here who made it onto the shortlist](#)), the winners and second and third place were chosen on the first day of the fair, 7 November.

PICTURE GALLERY
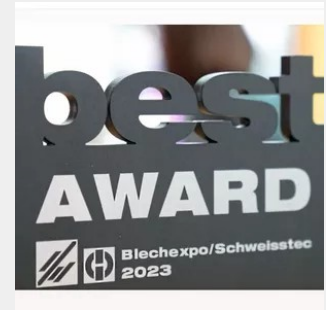
Winners and nominees in the categories "Sheet metal, tube and profile processing", "Pressing and forming technologies", "Steel, metal service and surface technology", "Punching technologies" and "Cutting, joining and bonding technologies" were delighted with their awards and toasted together with a glass of sparkling wine.

Realise precise, partial spray patterns

In the "Sheet metal, tube and profile processing" category, Senodis won ahead of J.Schmalz (plug-and-work robot solution for the autonomous handling of different and unknown sheet metal blanks "Solution Kit ivOS sheet metal") and Hans Schröder Maschinenbau ([swivel bending machine](#) "EVO DuoBend") with the heat-resistant and digitisable component marking "CeraCode". The marking technology enables hot-formed metal components to be individually labelled before heat treatment and digitally identified or made traceable. An ink based on ceramic pigments is used to generate codes - so-called data matrix codes - which can be reliably read by machine even after heat treatment in a continuous furnace at over 1000 degrees Celsius.

First place in the "Pressing and forming technologies" category was taken by Schuler (process for hot forming of aluminium) and Ilariz (digital tool monitoring system "Tool.Monitor") from Raziol with the high-performance precision spray nozzle for oiling "Einstein". The new technology around

"Einstein" improves precise and reproducible oil application. The integrated actuator makes it possible to adjust the stop of the nozzle needle in the micro range at a very high adjustment speed. This enables greater flexibility in lubricant application, as different media with different viscosities can be applied without any problems. The scope here ranges from low-viscosity (e.g. water- or solvent-based) lubricants to high-viscosity deep-drawing oils, which can be applied without manually changing the settings on the Einstein nozzle.

In addition, the nozzles can each be controlled separately to realise precise, partial spray patterns.

Only 100 per cent tested good parts

In the "Steel, metal service and surface technology" category, Peitzmeier Maschinenbau won the race against Hans Weber Maschinenfabrik (deburring and rounding unit "E-Aggregat") and Saint-Gobian Abrasives (flap disc for processing soft metals "Norton ALU Mesh"). Peitzmeier has developed a measuring system for visual workpiece recognition for automatic programme generation. This captures the complete workpiece geometry before the actual grinding process. For this purpose, a laser sensor moves over the sheet metal part to be processed and measures its three-dimensional contour. The recorded data is sent to the machine control system, where the machining programme is then created automatically. The time-consuming programming work previously required for the sometimes complex geometries is no longer necessary; the production staff only have to adjust the grinding parameters pressure or speed if required.

As Jenoptik prevailed in the "Punching Technologies" category against Rea Elektronik (h i g h - r e s o l u t i o n printing of lubricants with a cartridge system "Rea Jet HR Lube") and Stampack (forming simulation "Springback Compensation"), the award for the "PSS-40 LCLW" high-speed sorting and inspection station with cameras and laser goes to Jena. The reason: the PSS-40 Laser Cutting Laser Welding inspection and sorting station replaces the manual or semi-automatic process of mechanical cutting and subsequent joining with a fully automated laser cutting and welding process. It serves to optimise these processes and enables the uninterrupted punching production of strip products, including a wear-free 24/7 sorting function for reject parts. In the inspection software, components rated as "out of tolerance" are marked using a software marker and can be separated out in a subsequent process. Afterwards

the carrier strip is reassembled in order to produce only 100 per cent tested good parts.

In the "Cutting, joining and connection technologies" category, Trumpf was able to hold its own against Hugo Kern & Liebers ("High Performance Friction Stir Seam" welding connection) and Carl Cloos Schweißtechnik ("MRW-FEx robot welding torch" torch-integrated welding fume extraction system). The sensor system for online seam tracking "Smart Seam Tracking" is designed to significantly simplify the programming of the automated arc welding solution "TruArc Weld 1000" and increase process stability at the same time. All the user has to do is bring the welding robot into the start position. The rest is done by the technology. With the help of the sensor, the robot automatically prepares the welding path. Meanwhile, the associated software calculates the welding points, torch position and alignment in real time and creates the welding programme for the component. This allows the robot to get started within seconds. The seam detection functions not only during programming but throughout the entire welding process. Any tolerances and deviations on the path are corrected online.

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