

TOX®-Monitoring – more than just process monitoring

With the hardware components TOX®-Process Monitoring and the TOX®softWare HMI, all processes for clinching, riveting, machining and press-in/assembly operations are evaluated and documented via force/displacement monitoring.

The technology company TOX® PRESSOTECHNIK GmbH & Co. KG, D-88250 Weingarten, realized early on that mechanical engineering components only turn into a system if process monitoring is also considered. Press force drive technology, clinching technology or process-specific tools, control technology, force/displacement process monitoring – the customer-specific solution is created from this product and construction portfolio, which is adapted to the respective process chains. This self-contained program impresses the manufacturers and suppliers of series and large series products not least because the in-house manufacturing technology is complemented by internally developed monitoring, thus guaranteeing seamless monitoring and documentation of all process steps or processes and data in one mold. Today's product range TOX®-Controls and TOX®-Monitoring comprises, in addition to the machine controls, the components for sensor technology, TOX®-Process Monitoring/TOX®-Pressing Monitoring and TOX®softWare.

Based on the concept of monitoring in all process phases, the aspects of process requirements (sheet thickness, elements to be inserted), process sequence (window, envelope), end values (with end window) and documentation by means of end value tables (data archive, quality data interface) are considered for the applied force/displacement monitoring. The hardware includes the EPW 400 and EPW 500FP pressing monitors and the clinching monitor CEP 400T, which are characterized by different performance features.

EPW 400 and CEP 400T provide a 1-channel force/displacement monitoring or a 12-channel force monitoring. Data acquisition is performed with 16 Bit@2kHz, and the archive can store up to 100 curves and 1000 end values. A 5.7" touchscreen monitor is available for operation/programming, and communication occurs via all known fieldbus systems. EPW 400 and CEP 400T work with up to 64 measurement programs, whereby one envelope and 10 windows can be used per program. The IO output occurs via switch outputs and fieldbus, data storage via USB and Ethernet.

The pressing monitor EPW 500 FB also provides 1-channel force/displacement monitoring. Data acquisition is identical. For operation/programming, a 7" touchscreen monitor is used here, and an IO control is installed. The EPW 500FP works with a maximum of 128 measurement programs, whereby an envelope and 10 real-time windows are

Image 2 shows the pressing monitor EPW 500FP

