

On the way to digitization with Telsonic Telso®Flex software

A Key Element Of The Digital Revolution In Ultrasonic Welding

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SIEVING



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There is no doubt that the manufacturers across multiple sectors are embracing the many benefits of the digital world. The ability to link manufacturing operations and processes using the latest digital technologies makes it possible to streamline processes, enhance data acquisition and analysis, in turn increasing efficiency and productivity.

Whether the term used is Industry 4.0 or Smart Manufacturing, the implementation of digital technologies within a manufacturing environment is disrupting the way products are designed, produced, applied, and operated.

As a global leader in the manufacture and integration of ultrasonic technology across multiple manufacturing sectors, Telsonic is also at the forefront of this digital revolution in manufacturing.

The latest innovation from Telsonic is the Ultrasonic Generator MAG Weld Control with Telso®Flex software, a digitalisation level which delivers a unique approach, and sets a new benchmark in ultrasonic process control. This is achieved by digitally linking the different phases of a project including: application engineering, integration and commissioning, operation and service.

MAG Weld Control makes it possible to digitally connect the individual ultrasonic components to form a complete system. Used in conjunction with Telso®Flex control software, already proven within both ultrasonic welding systems and automation lines.

At the application engineering level, MAG Weld Control promotes efficiency, optimising the application through enhanced process parameter settings, achieved through software aided system configuration. During the integration



01 MAG Weld Control in the range from 1,2–7,2kW

and commissioning phases, Telso®Flex makes it possible for the system to be automatically configured with component-specific parameters from the parameter setting sheet (PSS). The information contained in the PSS originates at the design and manufacturing stages where each sonotrode receives a unique digital signature. This includes 14 pre-defined parameters and 8 check-sum values. Following final testing, the results/parameters are encoded together with the sonotrode serial number. This means that these pre-defined application parameters can only be used with the sonotrode which has the correct serial number.

In addition, each element of the ultrasonic acoustic system is delivered with its own unique ID, in the form of a numerical code, 2D Matrix code or as detailed on the PSS. This means that once scanned by Telso®Flex, the Ultrasonic Generator MAG Weld Control has all of the information relating to the cable, converter, booster and sonotrode that are connected as part of the acoustic system. The parameters for the sonotrode are used to automatically setup the generator and weld control unit for the application.

Another key feature of Telsonic's MAG Weld Control is the Tec-Mode functionality. Acting as the interface between the ultrasonic components and the production line, Tec-Mode facilitates "Plug & Play" integration of the ultrasonic generator, which in itself significantly reduces the engineering effort needed to bring the system to an operational state. During tests, the time required to install the MAG Weld Control Generator, and be ready to begin production, was reduced from several days, to just minutes, a significant benefit to both integrators and end users alike. Telso®Flex also supports maintenance functions such as the planning of service intervals, remote software upgrades and the generation of service logfiles.

Accessible through any web browser, including mobile phones and tablets, Telso®Flex allows log-in for different access levels for manager, maintenance, and operator etc. The enhanced functionality provided by Telso®Flex, in the form of smart data handling, transparency, traceability, and error prevention will be a valuable asset to manufacturers seeking to digitalise their production processes.

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