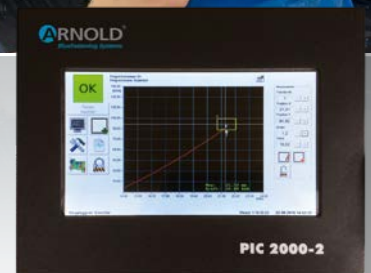


Controltec

Precise monitoring of individual pressing processes

- ⊕ easy to use
- ⊕ flexible analysis
- ⊕ monitors the pressing processes
- ➔ www.arnold-fastening.com

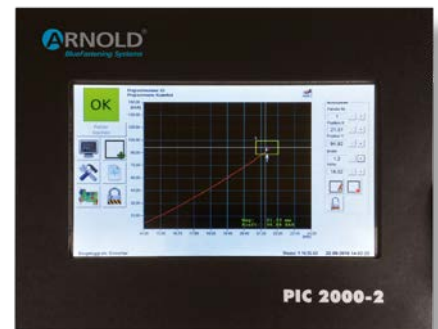


Controltec – precise monitoring of individual pressing processes

A fastening has to reliably maintain its specified properties. For example, car manufacturers ensure that it does so with a high repeatability rate by making use of self-clinching systems. The accompanying monitoring technology records and monitors the correctness of the required parameters.

It is during series manufacturing it is most important that production runs smoothly. This also affects the clinching processes at the fastening points. But before that can happen and before everything is running smoothly, it is necessary to define the key data for the point of fastening. The customer usually specifies that he wants to insert a new element into a metal part. It is necessary to adhere to

The Controltec PIC2000 monitors the insert process to ensure that it keeps to the specified limiting values.



Controltec concentrates on the fastening process itself

Process monitoring consists of two parts. The first is the analysis unit to which the sensors for path and force are attached. This is intended to be rail mounted inside the control cabinet. The other component of process monitoring is the touch panel. It records the measurement graph and can also be used to configure the measuring instrument.

certain key data for the fastening point. A series of customer requirements need to be implemented, starting with sorting the fasteners into the correct position, then conveying them to the machine, and then actually clinching them into the part. The main thing is that at every pressing stroke, assurance must be given that the fasteners in the clinching systems are in the correct position, and often in very rapid succession.

After the piercing operation the process monitoring

A characteristic curve is recorded for every clinch operation. The pull-out force for the fastener is then measured as well as the penetration depth as defined by the customer for each specific application. To handle the task we have developed Controltec – a control system that is precisely adapted to individual customer requirements.

Ease of operation and flexible analysis

The process monitoring system is operated and configured on the small panel PC's touch screen.

Enhancements to process monitoring are planned

With our own development, which we have incorporated into our plant technology, we are able now to react



- + The "Controltec" controller can be adapted to individual customer requirements
- + Reliable monitoring of preset limit values
- + Measurement of the pull-out force for the fastener and insert depth
- + Recording of characteristic curves for every clinch operation
- + Easy operation via touchscreen

The analysis unit, to which the sensors for path and force are attached, can be rail-mounted inside the control cabinet.

Initial applications for complex clinching processes have been proven in practice

The PIC 2000-2 process monitoring system can be implemented anywhere where a process needs to be registered. According to two technical factors using an analogue standard 0-10V signal, and then analysed against several criteria. This perfectly tailored process monitoring system is especially interesting to automotive manufacturers – as can be seen from initial orders.

More quickly to new requirements and changes on the market. We can even implement specific customer wishes, such as extending the functions, without difficulty.

To adjust the system's scope of performance to deal with even more complex applications, the developers at ARNOLD UMFORMTECHNIK are working on an extension – a multi-channel monitoring layout that can monitor up to four pairs of sensors to monitor four different positions at once.

The ARNOLD GROUP

Wherever customers need us.

The ARNOLD GROUP

ARNOLD – this name is internationally renowned for efficient and sustainable fastening systems on the highest level. With a foundation of many years of expertise in the production of intelligent fastening systems and very complex extruded parts, the ARNOLD GROUP has developed over a number of years into a comprehensive supplier and development partner for complex fastening systems. With our positioning of “BlueFastening Systems” this development process will continue under a united and harmonized structure. Engineering, fasteners, and functional parts, together with feeding and processing systems, all from a single source – efficient, sustainable and international.



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