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**Medical Area at the METAV 2018: customised solutions for curative competence**

**Frankfurt am Main, 23 November 2017.** – According to experts, “only the best of the best” in terms of machine tools qualify for use in the medical technology sector. From the viewpoint of a long-standing exhibitor at the Medical Area, the Citizen company elucidates how this is achieved even for highly complex 3D parts by a vastly experienced pioneer.

“Medical technology requires high-precision components in terms of quality and dimensional accuracy,” explains Nils Westphal, Branch Manager at the Neuss facility of Citizen Machinery Europe GmbH. “We went into this sector more than three decades ago in Germany and Europe.” Because Citizen was originally a watch producer, the company has always, from its everyday business, been familiar with the manufacture of systems fine-tuned to operate with maximised precision.

**People want an “All-Round No-Worries Package”**

The customers include globally operating companies that use Citizen’s automatic sliding-head lathes to manufacture bone nails, implants, cannulae, surgical tools and instruments, for example. To quote Nils Westphal: “All the firms involved insist on maximally stringent stipulations not only for their parts, but also for the capability and reliability of the process concerned.” This is why Nils Westphal speaks of what he calls an “All-Round No-Worries Package”, in which the actual machine accounts for around 50 per cent in terms of value. This is complemented by the complete peripherals, which combine to image the entire process. They include not only the loading magazine, the feed system, the high-pressure pump assembly, the discharge system, the palletising unit and the laser head, but also safety-relevant peripherals like fire extinguishing and extractor equipment.

The All-Round No-Worries Package even goes so far that Citizen at a customer’s request will check the process for at least one component earmarked for production on the automatic sliding-head lathe and develop it to optimum process-reliability. “Thanks to our meticulous process acceptance-testing procedures, users can begin production immediately,” says Nils Westphal. “Process-reliability has to be high in order to meet the stipulations applying for validation and to compensate for the shortage of skilled personnel by means of automated manufacturing.” Only with process-reliable operational procedures can the specialist personnel involved handle several machines in the process and maintain high levels of quality assurance. Appropriate training courses from the basic level upwards also support the customers in skilling the requisite specialised personnel.

**Cleanliness is the paramount priority**

Cleanliness also plays a vital role in medical technology. Easily accessible machine interiors, automatic chip removal and high-pressure cooling lubrication systems, self-cleaning with a 20-µm filter, ensure that the automatic sliding-head lathes can operate dependably round the clock. “Meanwhile this form of complete machining has already been incorporated in many of the sector’s specifications,” reports Nils Westphal. No less important is burr-free external and internal machining, where the biggest challenge lies in internal boreholes in the ultra-small diameter range, i.e. 0.6 down to 0.25 mm and smaller.

For Nils Westphal, the METAV is an excellent opportunity to showcase the company’s specialised solutions. Back in 2014, under the aegis of the Metal meets Medical Special Show (today’s Medical Area), Citizen had found the fair to be highly beneficial. “We attend the METAV with a major stand of our own anyway,” says Nils Westphal. “With the Medical Area, the METAV offers us a welcome opportunity for separately presenting our corporate expertise in the field of medical technology. We are primarily targeting potential customers from the west and north of Germany, but we are, of course, also happy to welcome visitors from all the rest of Germany and from abroad.”

**Machining 3D parts in a single setting**

At the Medical Area, Citizen will be exhibiting its Cincom M16-4M8 sliding-head lathe, which is able to machine in 10 to 12 axes workpieces with a diameter of 1 to 16 mm and a maximum machining length of 200 mm. This high-end machine also enables special-shaped 3D parts (such as bevelled implants from dental technology) made of titanium or stainless steel to be manufactured in their entirety in a single setting. “This means that even parts for venous valves can be turned, which used to receive their final contours by milling,” explains Nils Westphal. “Nowadays, they’re produced in a single setting directly off the peg.” Among the special challenges involved in metal-cutting operations are angled abuments (dental support elements) featuring complicated oblique-hole drilling.

(4,831 characters incl. blanks)

*Author: Nikolaus Fecht, specialist journalist from Gelsenkirchen*

**Profile**

Citizen Machinery Europe GmbH (CME), headquartered in Esslingen (around 60 employees) is the European subsidiary of Citizen Machinery Japan, one of the world’s leading manufacturers of CNC sliding-head lathes and CNC fixed-head lathes. As a company, CME belongs to Citizen Watch Co., Ltd. Japan. Since taking over the Esslingen-based company Boley GmbH, Citizen Machinery Europe also has roots in Germany.

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**Background: the METAV 2018 in Düsseldorf**

The METAV 2018 – 20th International Exhibition for Metalworking Technologies – will be held from 20 to 24 February in Düsseldorf. It will be showcasing the entire spectrum of production technology. The keynotes will be machine tools, manufacturing systems, high-precision tools, automated material flow, computer technology, industrial electronics, and accessories. These will be complemented by the new themes of Moulding, Medical, Additive Manufacturing and Quality, which are firmly anchored in the METAV’s exhibition programme in what are called “Areas”, each with its own nomenclature. The visitor target groups for the METAV include all industrial sectors that work metal, particularly machinery and plant manufacturers, the automotive industry and its component suppliers, aerospace, the electrical engineering industry, energy and medical technology, tool and mould construction, plus the metalworking and craft sectors.

You will find texts and pictures for the METAV 2018 on the internet under [www.metav.de](http://www.metav.de) in the Press Service section. You can also visit the METAV through our social media channels.

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