



## P R E S S   R E L E A S E

### **HEIDENHAIN TO SHOW CONTROLS AND MEASURING TECHNOLOGY AT EMO 2019**

- Controls and encoders, Hall 9, stand I32
- TNC Club, Hall 9, stand K32
- Live demonstration of “Intelligent data management in automated manufacturing” with OPS-Ingersoll and Haimer, Hall 9, industrie 4.0 area
- Young Talent Foundation for Mechanical Engineering for advanced and apprentice-level skills training, Hall 25

To manufacture products that satisfy the highest demands for accuracy and quality in a reliable, economic and efficient manner, having command of complex milling and turning processes is a competitive advantage, German company HEIDENHAIN believes that machine tools equipped with its controls, encoders and drive technology provide the best technical prerequisites, as will be presented during live demonstrations at EMO 2019, Hannover, 16th - 21st September 2019.

#### New options, features and hardware for HEIDENHAIN TNC controls

Starting with a batch size of one, TNC controls provide process reliability, accuracy and productivity as well as facilitating simple, reliable digital integration of the machine into the process chain. Ensuring this are various

functions including Dynamic Precision, Dynamic Efficiency and Connected Machining as well as numerous additional options.

Due to its split screen, the new TNC 640 with 24-inch widescreen and Extended Workspace Compact offers two work areas, allowing a user to have other applications displayed alongside the screen to create a user-friendly workstation for organising jobs digitally directly at the control.

HEIDENHAIN will also present the new Component Monitoring option for TNC controls, which observes processes and protects machines from equipment failure due to wear or overload. For example, continuous monitoring of spindle bearing load avoids defined limits from being exceeded, preventing damage to the spindle. Monitoring of the feed axes allows conclusions to be drawn concerning ballscrew wear and any potential failure. It increases process reliability, productivity and lifetime of the machine, while at the same time reducing unplanned machine downtimes and their associated significant costs.

During live demonstrations in the 'mav industrie 4.0 area', HEIDENHAIN, OPS-Ingersoll and Haimer will show that intelligent data management of an automated manufacturing environment, including predictive job planning, works reliably and efficiently. The TNC 640 control with Batch Process Manager and StateMonitor software from HEIDENHAIN enables well organised, fully digital processes.

### An encoder solution for every rotary axis

HEIDENHAIN encoders for determining the position of linear and rotary axes are the industrial standard for closed-loop control, especially for dimensionally accurate production of contours that are not affected by thermally induced

changes in the feed mechanism. At EMO 2019, the company will focus on angle encoders and together with Austrian group member AMO will present solutions for every rotary axis.

The RCN 2001 optical angle encoders with integral bearing and integrated stator coupling have been fundamentally redesigned. System accuracy is now even better and maximum speed is higher. Enhanced capabilities for monitoring the temperature increase process reliability. The encoders accomplish this by transmitting not only temperature values from their integrated sensor over a digital interface, but also other sensor data, particularly the temperature of the torque motor.

The new generation of modular, optical ERA angle encoders is now equipped with the HEIDENHAIN HSP 1.0 signal processing ASIC (application-specific integrated circuit). Until now, the HSP 1.0 has been used only in exposed linear encoders. It almost entirely compensates for fluctuations in signal amplitude caused by interference.

AMO will also present its WMKA modular, scale-tape solution for especially large diameters. These encoders feature EnDat and DRIVE CLiQ interfaces and are suited to safety-related applications. A demonstration unit with four different angle encoders will illustrate the influence of the scanning principle on the dynamics and accuracy of rotary axes. It will also show the system architecture for digital temperature monitoring of a torque motor from ETEL, Switzerland, another member of the HEIDENHAIN group.

### Innovative set-up and measuring

HEIDENHAIN touch probes and numerous probing cycles in the company's control systems increase the dimensional accuracy of finished workpieces.

Set-up and measurement of workpieces and tools as well as calibration of machine kinematics are performed quickly and easily before machining or during production. The touch probes are optimally tuned to the TNC cycles. Moreover, the wear-free sensor technology of the touch probes, flushers/blowers for cleaning the stylus, battery monitoring and effective collision protection ensure that results are measured with high process reliability.

### New generations of drive systems

Motors and control technology from ETEL and HEIDENHAIN significantly contribute to dynamic, accurate motion control of machine tools.

The new GEN 3 generation of drives from HEIDENHAIN, which will debut at EMO 2019, ensures maximum performance and offers intelligent transmission technology, powerful diagnostics and simple mounting and connection.

ETEL will present its TMB and TMK series of torque motors, which are high-torque systems for machine tools. Their particular strengths are a cogging-free design, optimum speed stability and exceptionally high control quality.

Together with measuring technology from HEIDENHAIN, they form an ideal combination for high-end rotary axes. Their dynamic accuracy, high rotational speeds and torques, and coordinated diagnostics are all noteworthy.

### TNC Club: the meeting point for experts, now with new training offers

Once again a meeting point for experts, the HEIDENHAIN TNC Club stand is open to all TNC users. The focus is on the advanced training of experienced specialists as well as on apprentice training of qualified junior employees. TNC

Club will present a new training program for career progression: a training program to become a TNC specialist. In this way, HEIDENHAIN supports premium members of the TNC Club in coping with the shortage of skilled staff.

#### HEIDENHAIN is a partner of umati

Digital networking and the associated possibilities for machine data acquisition as well as for monitoring of equipment and processes require universal, standardised interfaces. Only if standardised information can be exchanged between participants across systems is it easy to connect solutions like StateMonitor software, which can then develop their full potential. That is why HEIDENHAIN supports the umati interface project from VDW, the German Machine Tool Builders' Association.

Dr Jan Braasch, Director of Marketing at DR. JOHANNES HEIDENHAIN GmbH says, "As a manufacturer of controls and encoders, we welcome the VDW initiative and support the umati project. At EMO we will give a live demonstration of how umati is used to connect machine tools to StateMonitor software."

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#### **Two photographs attached:**

- 1 Due to its split screen, the new TNC 640 with a 24-inch widescreen and Extended Workspace Compact offers two work areas, one for the control screen and one for other applications.
2. The new GEN 3 generation of drives from HEIDENHAIN offers maximum performance through innovative transmission technology and powerful diagnostics.

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