

NILES-SIMMONS-HEGENSCHEIDT



PRESS RELEASE

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NILES-SIMMONS-HEGENSCHEIDT at the intec Leipzig from 26th to 29nd February 2008

At the intec Leipzig, the NILES-SIMMONS-HEGENSCHEIDT Group will exhibit the CNC N 10 Lathe and the Crankshaft Deep Rolling and Roll Straightening Machine, Type 7893R in Hall 01, Booth D02/E01.

The Corporate Group

NILES-SIMMONS-HEGENSCHEIDT (NSH)

with its headquarter domiciled at Chemnitz combines over 170 years of experience gained in German and US-American machine tool construction. The Concern makes a turnover of about 185 million Euros with 950 employees altogether. The Corporate Group has got a multi-product structure, numerous international patents and renowned references as well as own sales and service offices all over the world. Two innovative machines will be introduced at the Fair.

The improved **N 10 CNC Lathe** makes possible to machine cam-, gear-, propeller shafts, shafts for electric motors, gear parts, axle drive casings and case parts for soft and hard processing. Components can be processed with a turning length up to 1300 mm whereas the driving power of the turning spindle adds up to 29 kW.

The benefits of the improved N 10 CNC Lathe of NILES-SIMMONS are manifested in high performance characteristics, utmost precision, flexible adjustment to technological requirements, minimized idle times and compact machine construction as well as high serviceability and maintainability. A representative characteristic is the service aisle between machine and control cabinet. Thanks to an ecologically-friendly technology of the dry processing it is possible to accomplish an efficient disposal. To improve the chip clearance every single energy line is mounted outside of the working chamber.

The N10 allows mirror-inverted arrangement of such single components as main spindle, tailstock, counter spindle, tool slide 1 and tool slide 2 thus overcoming the conventionally rigid and one-sided machine alignment. Therefore, shortest traverse paths and feed motions are realized, minimizing idle times in conjunction with high acceleration rates and rapid feed movements of horizontal axes (50 m/min) and vertical axes (40m/min) as well as highly dynamic drives. As a matter of course, driven tools for milling and drilling operations are provided in addition to turning operations.

The control system SINUMERIK 840 D sl affords to connect all components with the central control by DRIVE-CLiQ. That makes it possible to manage peripheral attachments such as post-process-gauging stations, chargers and accumulators via Profibus/ Profinet.

The latest generation of the HEGENSCHIEDT-MFD **deep rolling and roll straightening machine Type 7893R** for increasing the fatigue strength of crankshafts subject to high stress is being presented at Intec 2008. It features a new control concept and continues to be even more economical. The control concept has been redesigned to replace the current tandem computer solution, consisting of a PLC and a process computer, with a high-performance PLC solution.

The machine is equipped with HEGENSCHIEDT-MFD high-performance tools to guarantee the longest service life possible.

Using deep rolling technology, undercuts can be applied to the transitions between the crankshaft bearings and the webs by turning, turn broaching or milling. This simplifies subsequent grinding processes, which in turn leads to significant savings. Systematic roll straightening gives the crankshafts the required run out accuracy. Accurate probes and an integrated laser measuring device ensure that machining precision is high. Combined deep rolling and roll straightening is an energy-saving process with low operating costs that significantly increases the fatigue strength of crankshafts. The roll straightening process reduces the grinding allowance, leading to considerable savings as well. This innovative machine concept is characterised by high availability and output, as well as low servicing requirements. In addition, the deep rolling and roll straightening machine is available in a number of different variants, and can be used flexibly in production. With an ergonomic loading height of only 1100 mm and distance to machining centre of only 500 mm, it can be manually loaded by an operator. The machine is outstanding for use in mass production: its extremely short cycle times of less than 47 seconds include a roll straightening cycle and 10 seconds of loading and unloading time by automatic loading gantry.

In a longer version with its deep rolling force increased to 40 kN, the HEGENSCHIEDT-MFD Type 7893R can also machine truck crankshafts up to approx. 1.3 m long.



1 CNC Lathe N 10



2 Deep rolling and roll straightening machine Type 7893R

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