

### Industry Sector Drive Technologies Division

Nuremberg (Germany), September 09, 2009

**Preliminary report EMO 2009**

#### **Energy management for machine tools**

**At the EMO trade fair for machine tools being held in Milan from October 5 through 10, Siemens Drive Technologies will be exhibiting solutions for the energy efficient automation of machine tools. The spectrum ranges from component innovations with improved effectiveness, right up to energy efficient optimization of machines early on in the engineering phase using simulation tools. Energy efficient machine tools help lower operating costs for users and thereby increase productivity.**

Investments in new machinery and equipment must make financial sense for the future. At the same time, it must be possible to operate machines efficiently and adapt them flexibly to meet new product requirements. This is what users are looking for in new machines. A central component of efficient machine operation is end-to-end management of energy requirements and usage. Innovative automation solutions for machine tools offer users low lifecycle costs through intelligent energy management, minimized total cost of ownership and thereby increased productivity. As such, energy efficient automation solutions contribute to making new machines and equipment a sound investment for the future. An investment in energy efficient automation and drive technology pays for itself within a short time and then continues to have a positive effect on production with reduced unit costs.

At this year's EMO in Milan, Siemens will be presenting solutions for energy management in machine tools, starting with intelligent supply via the motor with improved efficiency, and ranging right up to complete, energy efficient machine optimization. Simulation tools allow machines to be optimized for energy efficiency early on in the engineering phase. With the Mechatronic Support service package from Siemens, a machine's combination of mechanical systems and drive technology can be dynamically analyzed and improved. This also includes consumption-based optimization of the moving mass. By using an end-to-end CAD/CAM/CNC chain, product

manufacturing can be designed with energy efficiency in mind right from the workpiece design phase.

The Sinumerik control effects savings while machines are running through its control-side energy management user interface. This includes the use of intelligent control algorithms and control software to optimize acceleration or jerk limitation. The efficient control of auxiliary processes, such as cooling or tool changes, as well as the requirements-based operation of auxiliary drives for machine-based logistics tasks can generate significant energy savings. Depending on the application, up to 60% of the energy used can be saved, for example by reducing the dynamics of tool changes or only activating chip conveyors when needed.

The use of energy efficient components, such as motors or converters, also saves energy costs. With the Sinamics range, users have access to a portfolio of drives which ensures optimum reactive power compensation in the power supply through Intelligent Infeed and is capable of feeding braking energy back into the circuit. When using intelligent supply technologies, it is often also possible to significantly reduce the connected loads and conductor cross-sections, which in turn saves costs early on when designing a machine.

You can find further information on the Internet at: [www.siemens.de/sinumerik](http://www.siemens.de/sinumerik)

This press release is accompanied by a picture which can be found on the Internet at: [www.siemens.com/ad-picture/2017](http://www.siemens.com/ad-picture/2017)

You can find the text on the Internet at: [www.siemens.com/automation/press](http://www.siemens.com/automation/press)



Siemens Drive Technologies will be exhibiting solutions for the energy efficient automation of machine tools at the EMO trade fair. The spectrum ranges from component innovations with improved effectiveness, right up to energy efficient optimization of machines early on in the engineering phase using simulation tools. Energy efficient machine tools help lower operating costs for users and thereby increase productivity.

You can find this photo on the Internet at: [www.siemens.com/ad-picture/2017](http://www.siemens.com/ad-picture/2017)

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The **Siemens Drive Technologies Division** (Nuremberg, Germany) is the world's leading supplier of products and services for production machinery and machine tools. Drive Technologies offers integrated technologies that cover the entire drive train with electrical and mechanical components. This includes standard products but also encompasses industry-specific control and drive solutions for metal forming, printing and electronic manufacturing as well as solutions for glass, wood, plastic, ceramic, textile and packaging equipment and crane systems. The services provided by the Division include mechatronics support in addition to online services for web-based fault management and preventive maintenance. With around 39,900 employees worldwide Siemens Drive Technologies achieved in fiscal 2008 total sales of EUR8.9 billion.