

Automation and Drives

For the Trade Press

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Preliminary trade fair report

Hannover Fair 2007

"HT-direct" high-performance torque motors reduce operating costs and increase availability

Siemens Automation and Drives (A&D) will be exhibiting a new series of high-performance torque motors for drive applications with high torques or low speeds of rotation. The motors from the HT-direct series are based on permanent-magnet technology. The HT-direct drives are characterized by their compactness, lower work and cost factors in installation and maintenance, reduced noise emissions and up to 3% greater efficiency compared to solutions with gears. Moreover, the low-maintenance design of the motors substantially increases availability.

The use of direct drives is in many cases advantageous, especially where high torques and low speeds are involved. Typical examples are presses and rollers of paper machines, cutters, edgers, winders and small rolling installations in the steel industry, as well as pumps and fans, plastic extruders, sugar centrifuges and gear testing benches. Direct drives for high torques can best be implemented with highly utilized synchronous machines based on permanent magnet technology. In contrast to induction machines whose reactive power requirement grows as the number of poles increases, a high-pole design for synchronous machines that are excited by permanent magnets can be created without difficulty. The high-pole version of a synchronous machine excited by a permanent magnet is characterized by short winding heads as well as by thin stator yokes. The result is a compact, space-saving type of construction.

The HT-direct drives from Siemens A&D are designed for high availability. The rare-earth magnets, for example, are dimensioned for multiple protection against demagnetization. They are also made of a low-corrosive alloy and are additionally protected by a special coating. The long storage life of over 60,000 hours ensures long maintenance intervals and high availability values.

The high-performance torque motors of the new HT-direct series can handle speeds of up to 800 r.p.m. and a torque range of up to 42 kNm. This corresponds to an output of 2100 kW. The low-voltage HT-direct motor, which has a solid shaft, is available either with air cooling in a gray cast iron housing or with water-jacket cooling in a steel housing. The standard degree of protection is IP55. The motors have been conceived for operation with frequency converters and, with the Sinamics devices from Siemens A&D, form an integral drive system with very high efficiency levels.

This press release is supplemented by a photo which you can view in the Internet at: www.siemens.com/ad-picture/1415

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Siemens Automation and Drives (A&D) has developed a new series of high-performance torque motors for drive applications with high torques or low speeds of rotation. The motors from the HT-direct series are based on permanent-magnet technology. The HT-direct drives are characterized by their compactness, lower work and cost factors in installation and maintenance, reduced noise emissions and up to 3% greater efficiency compared to solutions with gears. Moreover, the low-maintenance design of the motors substantially increases availability.

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Please phone us if you require a copy of the photo.

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