



Sojitz Cororation
Toshiba Mitsubishi-Electric Industrial Systems Corporation

**Sojitz to be Ahead of the Rest of the World in the Introduction of
Direct Electric Drive Systems with the Use of Voltage Source Variable-speed Inverter Drive
Receives Order for Ultrahigh-speed, High-capacity Variable-speed Drive
Systems from Russian company Gasprom**

(Japan, February 7, 2005)--Sojitz Corporation (President and CEO: Akio Dobashi; hereafter called 'Sojitz') and Toshiba Mitsubishi-Electric Industrial Systems Corporation (President: Isamu Matsuyama; hereafter called 'TMEIC') have received an order worth approximately 1.4 billion yen from the world's largest gas production and distribution company, Gasprom, for four sets of ultrahigh-speed, high-capacity variable-speed electric drive systems (motors and variable-speed inverter drives) for gas pipeline compressors. Installation work will start from fall, 2006, with operations scheduled to commence in early 2007.

This is the first order from Gasprom for electric drive systems made in Japan, and the drive system has been adopted ahead of the rest of the world, which system performs variable speed control using a voltage source variable-speed inverter drive. In the international bidding for the Gasprom contract, TMEIC was highly praised for its technologies and price competitiveness compared with European and American companies, and earned a high reputation as one of the world's top manufacturers, both of which factors resulted in receipt of the order. Furthermore, to date Sojitz has continuously received orders for pipeline equipment and appliances such as gas compressors delivered to Gasprom. The credibility established, and the trust earned through such performance contributed greatly to the receipt of the order.

The systems will be delivered to partially renew the compressor drives in use at gas pump stations located in the southern part of Russia, out of over 4,000 compressor drives used at gas pump stations that are owned by Gasprom throughout Russia on their existing gas pipelines

Sojitz and TMEIC will not only continue to aspire to consecutive order receipts from Gasprom, but will also aggressively make proposals for and increase orders for the system, targeting high-speed, high-capacity drive system users such as energy (gas and oil), chemical, steel, and pulp and paper industries around the world.

[Outline of the ultrahigh-speed, high-capacity variable-speed electric drive system]

The electric drive system, which uses an ultrahigh-speed, high-capacity variable inverter drive, eliminates emission of the CO² gas that is generated by conventional mainstream gas turbine drive systems. In addition, its excellent operability and ease of maintenance are drawing attention from energy industries throughout the world as a new-generation drive system. It is expected that full-scale introductions of the electric drive system will take place in future.

Main features

1. Introduction of the ultrahigh-speed, high-capacity motor (12.5MW, 5200 RPM) does not require the gear that is conventionally needed to increase rotation frequency. The compressor is driven directly, and space is not required to install a speed-increasing gear. Thus, the entire facility is simplified, and power transmission loss is reduced.
2. Introduction of the voltage source variable-speed inverter drive realizes stable variable speed control of motors. In addition, its reduced harmonics contributes to stabilization of the power system.
3. Through the adoption of the world's largest capacity power semiconductor device GCT^{*1}, the high-efficiency, compact size drive system is realized with little power loss

*1 Gate Commutated Turn Off Thyristor

[Outline of Gazprom]

Established: 1989
Address: Moscow, Russia
Capital: 118.3 billion rubles (approximately 443.9 billion yen)
No. of employees: approximately 330,000

Gasprom has proved gas reserves of 28.0 TCM (about 20 percent of the world's reserves), gas production volume of 540 BCM (about 25 percent of the world's production), and has a total gas pipeline length of 150,000 kilometers (about 50 percent of the total length of pipelines installed throughout the world). Gasprom is the world's largest gas producer and transporter, with the number of gas export destination countries reaching twenty-eight.

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