



ASM International N.V.

ASM INTERNATIONAL N.V. RECEIVES ORDER FOR ATOMIC LAYER DEPOSITION EQUIPMENT

Key US customer orders Polygon[®] high-k gate stack tool, with EmerALD[™] Plasma Enhanced ALD module for metal gate electrode

ASM extends ALCVD[™] high-k gate collaboration to include metal gates

Bilthoven, The Netherlands – April 25, 2005 --- ASM International N.V. (NASDAQ: ASMI; Euronext Amsterdam:ASM) today announced that it has received a purchase order from a key US customer for a 300mm capable Polygon[®] atomic layer CVD cluster tool to support advanced 65nm high-k gate stack development, including metal gate electrode materials. Delivery is planned for the current quarter.

ASM is the market leader in ALD high-k process technology. Ten of the top 15 IC makers are using ASM's ALCVD high-k dielectric technology. With this order, four leading fabs are now using both ASM's ALCVD high-k and PEALD metal deposition technology for gate stack applications. ASM is partnering with many leading device manufacturers to scale gate stack technology to 45nm and beyond, when electrical leakage performance of conventional silicon oxide dielectrics is expected to be too high.

“This customer's high-k gate stack process technology is among the most advanced we have seen. We are thrilled to continue working closely with them to help them develop a process integrated with metal gates”, said Dr. Henk de Waard, Business Unit Manager of ASM's Transistor & Capacitor Products Group.

“For several years, this customer has been using ASM's 200mm Polygon tool at its advanced R&D fab to develop high-k gate dielectrics. To expand this program they will now get the latest 300mm capable version of the Polygon 8300 Cluster Tool with Pulsar[®] 3000 modules for ALCVD[™] high-k dielectric film deposition and EmerALD[™] 3000 modules for PEALD[™] metal film deposition. ASM will collaborate with the customer to develop advanced gate dielectric film stacks, integrated with metal gate electrode for 65nm and beyond high performance logic devices.”

The Polygon product line, with Pulsar ALCVD and EmerALD PEALD process modules, is being used for high-k applications including dielectrics and metal electrodes for DRAM, RF and decoupling MIM capacitors, gate dielectrics for high performance and low standby power logic, and dielectric films for Flash and FeRAM.

The Polygon 8300 is a bridge tool, which enables development on 200mm wafers and easy field conversion to a 300mm configuration. The Pulsar 3000 ALCVD process module is the industry's leading tool for depositing the most advanced high-k gate



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dielectric films, such as hafnium oxide and hafnium silicate, with low leakage currents. The EmerALD 3000 process module is a plasma enhanced ALD (PEALD) reactor, which is used to deposit thin, uniform metal layers as gate electrodes. The PEALD process for metals reduces thermal budget because deposition occurs at lower temperatures (<300 °C), while maintaining low impurity levels in the film. PEALD also enables a shorter ALD cycle time, which increases deposition rate. The EmerALD reactor has the added flexibility to run in both thermal and plasma modes. Fundamentally, the layer-by-layer ALD process provides precise film thickness control, which is crucial for ultra-thin gate films.

About ASM

With headquarters in Bilthoven, the Netherlands, ASM International N.V., and its subsidiaries design and manufacture equipment and materials used to produce semiconductor devices. ASM International and its subsidiaries provide production solutions for wafer processing (Front-end segment) as well as assembly and packaging (Back-end segment) through facilities in the United States, Europe, Japan and Asia. ASM International's common stock trades on NASDAQ (symbol ASMI) and the Euronext Amsterdam Stock Exchange (symbol ASM). For more information, visit ASMI's website at <http://www.asm.com>.

Safe Harbor Statement under the U.S. Private Securities Litigation Reform Act of 1995: All matters discussed in this statement, except for any historical data, are forward-looking statements. Forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. These include, but are not limited to, economic conditions and trends in the semiconductor industry, currency fluctuations, the timing of significant orders, market acceptance of new products, competitive factors, litigation involving intellectual property, shareholder and other issues, commercial and economic disruption due to terrorist activity, armed conflict or political instability and other risks indicated in the Company's filings from time to time with the U.S. Securities and Exchange Commission, including, but not limited to, the Company's report on Form 20-F for the year ended December 31, 2004 and Forms 6-K as filed.

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