PRESS RELEASE

Almere, The Netherlands
July 7, 2021, 5.45 p.m. CET

ASM EXPANDS ITS EPITAXY PRODUCT OFFERINGS WITH NEW INTREPID® ESA™

New epitaxy tool addresses 300mm applications for power, analog and wafer markets

ASM International N.V. (Euronext Amsterdam: ASM) today introduced its Intrepid® ESA™ epitaxy tool for 300mm applications for power and analog devices, and for epitaxial silicon wafers. Based on the proven, high-volume-manufacturing Intrepid platform, the new ESA tool expands ASM's atmospheric epi offerings with ASM's first 300mm atmospheric cluster tool. The Intrepid ESA offers best-in-class on-wafer performance.

An expanding range of semiconductors are needed for 5G smartphones, internet of things (IoT), edge computing, automotive, sensors, renewable energy, and much more. ASM's epitaxy tools are critical for depositing silicon-based films in diverse, fast growing applications for analog and power devices, as well as for silicon wafer manufacturing.

For chipmakers, the metrics that drive product yield and fab operational cost will be of utmost importance: the ability to manufacture a wide range of different products; on-wafer performance metrics, such as within-wafer and wafer-to-wafer uniformity; and productivity and foot print efficiency.

ASM has responded to this critical customer need with the introduction of the Intrepid ESA. The Intrepid ESA has innovative technologies and features that provide unmatched in-film performance and reactor availability. These include a hot quartz isothermal reactor for superior temperature uniformity, allowing for the deposition of films as thick as 85µm without interruption and reactor clean, a significant throughput and device performance benefit. Furthermore, ASM has introduced the first 10-port MFC-based advanced gas injection system, called AEGIS™, providing flexibility for film thickness profile control.

To further enhance device performance and die yield, ASM has pioneered real-time closed-loop wafer temperature control during epi processing allowing for the in-situ measurement and control of wafer temperature simultaneously in different areas of the wafer during processing. This first-of-its-kind feature enables the elimination of thermal gradient induced wafer slip in high temperature processing, resulting in improved die yield. In addition, Intrepid ESA can hold up to four reactors on its XP platform. It is compact in size, has dual gate valves for isolating each chamber with the XP platform, and has independent gas delivery systems.

These features enable considerably higher throughput and thus improved platform efficiency (wafer output per square meter) which we view as unique strengths of the Intrepid ESA.

"Innovative process control features such as AEGIS and closed loop chamber temperature control uniquely position Intrepid ESA as the best choice for our customers running applications for power and analog devices, and for wafer manufacturers," said Dr. Hichem M'Saad, Executive Vice President and General Manager of ASM's Global Products. "ASM strives to enable customers to scale cost effectively and with greater yield."

More than 30 Intrepid ESA reactors, with repeat orders, are in production at different sites in Asia and the Unites States.

About ASM International

ASM International NV, headquartered in Almere, the Netherlands, its subsidiaries and participations design and manufacture equipment and materials used to produce semiconductor devices. ASM International, its subsidiaries and participations provide production solutions for wafer processing (Front-end segment) as well as for assembly & packaging and surface mount technology (Back-end segment) through facilities in the United States, Europe, Japan and Asia. ASM International's common stock trades on the Euronext Amsterdam Stock Exchange (symbol ASM). For more information, visit ASMI's website at www.asm.com.

Cautionary Note Regarding Forward-Looking Statements: All matters discussed in this press release, 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 generally and the timing of the industry cycles specifically, currency fluctuations, corporate transactions, financing and liquidity matters, the success of restructurings, the timing of significant orders, market acceptance of new products, competitive factors, litigation involving intellectual property, shareholders or other issues, commercial and economic disruption due to natural disasters, terrorist activity, armed conflict or political instability, changes in import/export regulations, epidemics and other risks indicated in the Company's reports and financial statements. The Company assumes no obligation nor intends to update or revise any forward-looking statements to reflect future developments or circumstances.

This press release contains inside information within the meaning of Article 7(1) of the EU Market Abuse Regulation.

CONTACT

Investor and media contact:
Victor Bareño
T: +31 88 100 8500
E: victor.bareno@asm.com