

Dainippon Screen joins IMEC's Ultra Clean Processing (UCP) program

Kyoto(Japan) and Leuven(Belgium), November 30, 2001

Dainippon Screen Mfg. Co., Ltd., known as DNS in the Semiconductor industry, and IMEC, Europe's largest independent R&D center in microelectronics and enabling information and communication technologies, announced today that Dainippon Screen joins IMEC's industrial affiliation program on ultra-clean processing. This program targets the development of ultra-clean technology 4 to 5 years ahead of industrial needs.

The collaboration will focus on the development of next-generation cleaning processes for single-chemistry cleaning - to replace the long established "RCA clean" process – as well as new processes for high-k dielectrics and metal gates. Single-wafer and single-chemistry cleaning will result in increased process control and shorter overall process cycle time with a reduced consumption of chemicals and ultra-pure water.

As part of the agreement Dainippon Screen will provide IMEC with one of its innovative single-wafer cleaning systems, a Spin Processor MP-2000, to support the related R&D work. In addition to the Spin Processor, Dainippon Screen will also send one of its top researchers to join IMEC development team for a period of three years.

"Sub-100nm technologies require new environmental friendly and economic viable cleaning processes with increased particle removal efficiency for ultra-small particles," said Prof. Gilbert Declerck, CEO and President of IMEC. "The combination of Dainippon Screen's expertise in wet cleaning coupled with IMEC's competencies in single-wafer wet cleaning, single-chemistry cleaning and high-k dielectrics will result in advanced cleaning techniques that will fulfil the needs of future technology generations.

"With the implementation of new materials such as high-k dielectrics and metal gates, there is a very high demand for new cleaning processes, beyond the traditional RCA clean." explained Nobutoshi Ogami, Corporate Executive Officer and President of the Semiconductor Equipment Division of Dainippon Screen. "We are very happy to join IMEC's UCP program, and believe that with our experience as the worlds leading supplier of wafer cleaning systems, and IMEC's know-how, the synergy will certainly bring new and innovative process solutions to match future demands."

About Dainippon Screen

Dainippon Screen Mfg. Co., Ltd., is a \$1.95 billion company quoted on the Tokyo stock exchange. It was established in 1943, and is one of the leading suppliers of semiconductor fabrication equipment, as well as the world's largest supplier of batch and single wafer cleaning systems. All of the company's production sites are certified for ISO9001 as well as for

ISO14001 Environmental Management System. Homepage: <http://www.screen.co.jp/>

About IMEC

IMEC was founded in 1984 and today is Europe's leading independent research center for the development and licensing of microelectronics, and information and communication technologies (ICT). IMEC is headquartered in Leuven, Belgium, and has a staff of more than 1100 people including over 350 industrial residents and guest researchers. Its revenue of more than 120MEURO is derived from agreements and contracts with the Flemish government and companies, the EC, MEDEA, the European Space Agency, equipment and material suppliers and semiconductor companies worldwide. IMEC's activities concentrate on the design of integrated information and communication systems; silicon process technology; silicon technology and device integration; microsystems, components and packaging; solar cells; advanced training in microelectronics. IMEC has a sub-0.25µm 200mm pilot line and is ISO9001 certified. News from IMEC is located at www.imec.be.

The IMEC Industrial Affiliation Programs (IIAP)

IMEC's industrial affiliation program (IIAP) formula is recognized worldwide as one of the most successful partnership schemes in research and development. The collaborations are based on shared costs and risks and are built on sound intellectual property rules. Thirteen IIAPs in other research fields are already in progress.

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