

Air Products' Global Network of NF3 Transfills Providing Reliable Local Supply to Semiconductor Manufacturing Customers

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Four nitrogen trifluoride (NF3) transfill facilities are enabling Air Products and Chemicals, Inc. (NYSE:APD) to provide reliable local supply of the world's leading chamber cleaning specialty gas to semiconductor manufacturing customers throughout Asia and Europe.

With facilities on-stream in Amagasaki, Japan and Tainan, Taiwan, Air Products has increased the number of NF3 transfills it and its joint venture partners* operate to four, complementing recently expanded transfill facilities in Shihwa, Korea and Keumiee, Belgium.

The semiconductor manufacturing industry has repeatedly acknowledged the superior productivity and environmental benefits NF3 delivers, particularly for remote plasma, in situ and thermal chamber cleaning applications. Processing advantages include reduced clean times and more uniform films after the clean cycle, minimal residual contamination and most significantly, throughput increases of over 30 percent. In addition, the combination of lower volume usage rates and the higher utilization efficiencies of an NF3 clean versus fluorocarbon alternatives results in a greater than 90 percent reduction of perfluorocarbon emissions.

"Our NF3 electronic specialty gas transfills have added another dimension to supply reliability for our customers," said Richard C. Kenner, general manager of Electronic Specialty Gases within Air Products' Electronics Division. "As the industry's leading supplier of NF3, we have a true understanding of the speed and quality demands our customers face in their advanced manufacturing technologies and processes. And we are committed to making these kinds of strategic investments to ensure reliable supply of this vital chamber cleaning product, when and where they need it," he said.

Air Products manufactures NF3 at its world-class Hometown, Pa. electronic specialty gases facility. The multi-train production plant allows for independent operation, thereby increasing supply reliability. By spring 2002, the company expects to bring onstream 2.775 million pounds of product using proprietary production technology developed in-house by a team of Air Products Electronics Division fluorine experts. The company's Asian and European transfills, including full analytical capabilities, then enable Air Products to provide a dependable supply source for local customers.

Beyond NF3, Air Products continues to lead the industry in the development, production and supply of other chamber cleaning and etching gases, including hexafluoroethane (C2F6), tetrafluoromethane (CF4), chlorine trifluoride (ClF3), sulfur hexafluoride (SF6) and hexafluorobutadiene (C4F6). The company prides itself on working closely with major industry OEMs and end-use customers to develop chamber cleaning optimization strategies, assisting in the selection of the most effective and economical gas relative to performance, facilitation and regulation based on cost of ownership criteria.

Air Products and Chemicals, Inc. (www.airproducts.com) is the world's only combined gases and chemicals company. Founded more than 60 years ago, the business has annual revenues of \$5.5 billion and operations in 30 countries. Air Products is a market leader in the global electronics and chemical processing industries, and a longstanding innovator in many industrial markets, including coatings, adhesives and polyurethanes. The company distinguishes itself through its 17,500 employees around the world, who build lasting relationships with their customers and communities based on understanding, integrity and passion.

NOTE: This release may contain forward-looking statements. Actual results could vary materially, due to changes in current expectations.

*Air Products' joint venture partners in Japan and Taiwan are Daido Air Products Electronics, Inc. and San Fu Chemical Company, Ltd, respectively.

EDITOR'S NOTE: Photos of the Amagasaki, Japan; Shihwa, Korea; and Keumiee, Belgium NF3 transfills and Air Products' Hometown, Pa. electronic specialty gases manufacturing facility are available via the company's on-line Press Room at www.airproducts.com/pressroom. From the main Press Room home page, click on "Multimedia Gallery," "Photo Library" and then on "Electronics."