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http://www.rasirc.com/news/downloads/photos/RASIRC_RHS.jpg

RASIRC Granted Patent on Vaporizer for Delivery of Water Vapor and Other Low Vapor Pressure Gases

Patent #7,618,027 covers unique humidification delivery process

San Diego, Calif. – November 23, 2009 – RASIRC[®], the steam purification company, announced today that the US Patent and Trademark Office has granted Patent #7,618,027 for a vaporizing device for control, delivery, and purification of water vapor in conjunction with a carrier gas. The patent is used in RainMaker[®] humidification systems (RHS) to control the transfer and purification of water vapor directly into a carrier gas stream including inert, corrosive, and flammable gases, such as hydrogen, at a wide range of flow rates for use in solar, microelectronics, and other critical process applications

“The ability to deliver precise amounts of water vapor into a carrier gas eliminates the need for bubblers and direct liquid injectors that are prone to clogging and calibration issues,” said RASIRC founder and president Jeffrey Spiegelman. “The RainMaker controls the amount of water vapor based strictly on the gas pressure and water temperature, and can deliver from micro-grams to grams of water vapor into gas flows from 20 sccm to thousands of liters into vacuum, atmosphere, or high pressures.”

RASIRC's patented process keeps water from mixing with the gas. It also keeps the pressure of water and gas relatively independent of each other. By keeping water pressure below gas pressure, water droplet entrainment into the process gas can be eliminated for better control and film uniformity.

A hydrophilic membrane excludes particles, micro-droplets, volatile gases, and ionic contaminants. Unlike nebulizers, bubblers, and other spray type vaporizers, the RHS prevents

water droplets from entering the process, enabling better film uniformity. This makes the RHS particularly well suited for micro-electronics and photovoltaic cell manufacturing processes.

About RASIRC

RASIRC products purify and deliver ultra pure liquids and gases. RASIRC technology is the first to generate ultra high purity (UHP) steam from de-ionized water. It reduces cost, increases yield, and improves safety. RASIRC dryers, humidifiers, and steam generators are of critical importance for many applications in the semiconductor, pharmaceutical, medical, biological, fuel cell, and power industries. Custom systems are available upon request. Call 858-259-1220, e-mail info@rasirc.com, or visit www.rasirc.com.

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