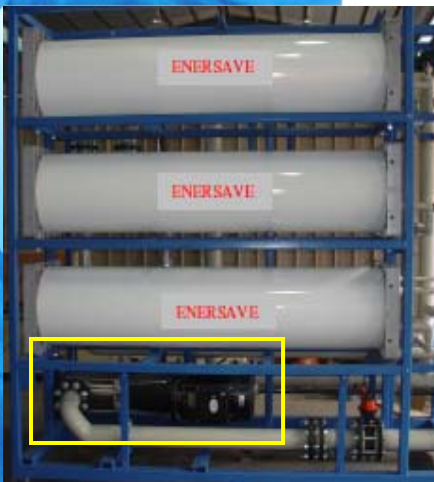


# ***Continuous Electrodeionization (CEDI) System for a leading 300mm Semiconductor Wafer Manufacturing Plant in Singapore***



*Our client is one of the world's largest semiconductor foundries by revenue with approximately \$2B US in 2009 and 10,000 employees spanning three continents across 12 locations. EES Technology Pte Ltd a subsidiary of Enersave Worldwide Sdn Bhd installed the CEDI system for one of their 300mm Wafer Fab Ultra Pure Water System in Singapore. The Wafer Fab combines a state-of-the-art process control and highly automated wafer-handling systems to deliver proven manufacturing excellence to customers at 0.13um, 90nm, 65nm, 45nm and below. The facility employs a comprehensive set of Integrated Yield System (IYS) to accelerate yield learning and enable faster production ramps for customer devices. The Fab produces 50,000 300mm wafers/month (112,500 200mm wafers/month equivalent) based on 0.13-micron to 40nm technology. The Fab's class-leading defective reduction and fast production cycle times were recognized when it was awarded the 2006 Top Fab Award by Semiconductor International.*



## ***900gpm CEDI system (2008)***

The projects involved the design, engineering, delivery, installation, testing & commissioning of CEDI skids complete with CEDI modules, piping, valves and fittings, rectifier and instrument panels, and EDI feed pumps for the 300mm fabrication facility. In 2008, six CEDI skids were installed and commissioned each with a capacity of 150US gpm or 900 US gpm in total and a total of eighteen CEDI modules. The skid design was customized to meet extremely tight space constrictions while still insuring ease of maintenance and continued excellent performance.



## ***600gpm CEDI system (2009)***

In 2009, four additional CEDI skids were installed and commissioned each with a capacity of 150US gpm or 600 US gpm in total and with a total of twelve modules. The combined total flow rate capability of CEDI provided by EES is now 1500 GPM, making it one of the world's largest Semiconductor installations of this type. All the CEDI skids are producing product water quality  $>16.5\text{M}\Omega\text{cm}$  in resistivity at 7Amps and approximately 200VDC. The feed to the CEDI system is RO permeate with a conductivity of  $\leq 8\mu\text{S}$ .

