

The Industry Standard Solution

The efficiency of a plant's energy recovery technology is critical to both winning big SWRO projects and achieving maximum plant profitably. Leading industry firms such as GE Infrastructure, Water & Process Technologies, Suez Degrémont, Befesa, INIMA, Beijing CNC Technology, Inc., and Aqua Engineering selected the ERI PX™ modular technology because it consistently achieves real energy transfer efficiencies—up to 98%, making it the most efficient energy recovery device available today. At the core of the PX device is a single moving rotor made of tough engineered ceramic that is unaffected by chemicals, will not corrode and requires no periodic maintenance. Over 60 OEMs have standardized installations using PX technology in desalination plants all over the world, such as Algeria, Australia, China, India, Spain and the UAE.

YuHuan Project Facts

- CAPACITY: 36,000 m³/day
- 6 trains - 6,000 m³/day
- 6 PX-220 PRESSURE EXCHANGERS PER SWRO TRAIN
- 95% EFFICIENCY GUARANTY
- ONE OF THE LARGEST DESALINATION PLANTS IN CHINA
- PLANT STARTUP — APRIL 2006

YuHuan Power Station SWRO Desalination Project



YuHuan, China Power Station

The desalination facility in China's Zhejiang Province is the largest desalination project in Mainland Asia. The plant, built by Beijing CNC Technology, Inc. will supply process water to new electrical power stations. The OEM's decision to use ERI's PX Pressure Exchanger™ Technology (PX™) for the 36,000 m³/day YuHuan desalination plant will prepare the Country for its 2008 Olympics.

The 1,800 MW power stations will expand China's electrical grid capacity in preparation for the 2008 Olympics. Rapid growth of the economy in China has stretched availability of electric power. Desalinating seawater by conventional "waste heat" recovery methods consumes a significant portion of a power plant's energy input. Compared to conventional technology, the PX cuts the amount of energy required to desalinate seawater for power plants by up to 68%. The use of PX technology at the YuHuan desalination plant makes possible a reduction in desalination plant power demand of over 4.4 MW- saving over \$2.0 million per year.

Other desalination plants, such as Beijing's CNC 5,000 m³/day SWRO plant at China Petrochemicals Dalian built in 2003 also uses ERI's PX-220 large rotor energy recovery technology. The East China Electric Power Design Institute Ministry (ECEPDI) and Beijing CNC specified ERI PX-220s for YuHuan based on the proven high efficiency and two-year trouble-free track record of the PX-220 installation at Dalian China Petrochemical. Because of its 98% energy efficiency solution, China now leads the world in the adoption of efficient PX technology with over 80% of seawater desalination plant capacity in the country using the ERI PX solution.



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Energy Recovery, Inc. (ERI) is the leader in manufacturing highest efficiency, energy recovery products and technology. Our PX Pressure Exchanger™ (PX™) is driving the rapid growth in the seawater reverse osmosis (SWRO) industry, and making desalination affordable worldwide. The PX is based on a rotary positive displacement pump that recovers energy from the high-pressure waste stream of SWRO desalination systems at up to 98% efficiency—with no downtime or scheduled maintenance. Since its introduction in 1997, the PX technology has emerged as the industry standard solution for seawater desalination. To date, ERI has sold over 2,000 devices worldwide, producing over 1.3 million m³/day of capacity, and saving customers 170 MW of energy, or \$120 million a year in operating costs.

The world's largest energy recovery device manufacturer* delivers:

- Proven SWRO Power Consumption as Low as 1.6 kWh/m³
- No Scheduled Maintenance Shutdown
- No Pulsations, or Complicated Controls
- The Simplest Solution to Lowest Lifecycle Costs
- Flexibility, Proven Reliability and Real Savings

Guaranteed.

Contact us today to find out how you can start saving, or to learn more about ERI and the PX solution, visit us at:

www.energyrecovery.com

*ERI Intelligence Report as of December 2005



YuHuan Power Plant, China — Process Room



YuHuan Power Plant, China — Trains #1 and #2



YuHuan Power Plant, China — Train #1

Making Desalination Affordable™



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