



Making Desalination Affordable

BIG BREAKTHROUGH TECHNOLOGY REDUCING ENERGY AND OVERALL COSTS



YuHuan Power Station Building SWRO Desalination Project

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 profitability. Leading industry firms such as GE Infrastructure, Water & Process Technologies, Suez Degremont and Beijing CNC Technology, Inc. choose to use ERI PX-220 modular technology because it is the most efficient energy recovery device available today. In addition, at the core of the PX device is a non-corrosive highly engineered ceramic rotor that requires no periodic maintenance. Over 100 OEMs use the PX device because of its proven, successful operating track record – running at over 95% efficiency in 10,000 m³/day lines globally. Some of these projects include the longest running trains operating with isobaric energy recovery devices for over 30 months.

Energy Recovery, Inc. (ERI), has built a team that has developed energy efficient recovery products and technology, specifically the ERI Pressure Exchanger™ (PX) device, that are among the enabling technologies driving the rapid growth in desalination, and are helping to make desalination affordable world-wide.

Please contact ERI today at sales@energy-recovery.com to learn more about the PX technology.

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™ 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 ERI PX Pressure Exchanger 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 97% 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.

YuHuan Project Facts

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