

## Industrial Water Treatment Programs

Pall Corporation is the global leader in the rapidly growing field of filtration, separation and purification. Pall is also recognized as being one of the largest water treatment companies in the world. Pall's broad capabilities and technologies for industrial water customers include:

- Total treated water capacity greater than 800 MGD and growing
- More than 25 installations specifically designed for wastewater reuse for utility water makeup and boiler feedwater
- Experts in water reuse engineering and water balance evaluations

Pall is recognized for its expertise in Industrial processes. For decades Pall has applied its separation and filtration knowledge and technologies to solve a variety of complex and critical applications.

We understand the origin of your process waters and their characteristics.

Our understanding of your process places Pall in the best position to define solutions for water treatment and reuse. We have experience in treating or developing solutions for some of the most difficult and troublesome process waters. Our technologies are applied to remove mercury, selenium, hydrocarbons, and other troublesome contaminants.

### **Our integrated systems include coupled MF/UF/NF/RO designs that offer:**

- Reduced system footprint
- Dramatic extension of RO membrane life
- Elimination of inter-stage pumping which simplifies operation and reduces operating costs
- Integrated ion exchange designs to provide turnkey solutions
- Conversion of raw water, C/T blowdown, or process water into high-quality boiler feedwater. Over 80 installations.



Our core technologies include a unique hollow fiber MF/UF membrane that can be configured in either an inside-out cross flow or an outside-in dead-end configuration. This allows Pall to optimize designs for the widely variable waters that your plant may generate or need to process.

- PVDF membrane is highly resistant to chemical attack
  - Unparalleled integrity
  - 0.00031% failure rate documented in a 5-year study. That equates to 6 fiber failures out of a population of 1,905,000 fibers in a 5-year period!
- Hydrophilic membrane types (PAN and certain ceramics) provide more resistance to oil fouling

**Pall ceramic systems and technologies** offer superior resistance to thermal and chemical degradation when facing water with extremes in pH and temperature. Pall manufactures ceramic membranes and modules that are utilized in systems optimized for specific characteristics. Pall ceramic technologies and systems are based on a variety of membrane configurations. Porous alumina structures are lined with asymmetric membrane layers made of alpha-alumina, zirconia, and titania which offer a range of ultrafiltration efficiencies.

We invite you to learn more about Pall and our Industrial water capabilities. Visit us on the web or contact your local Pall representative.