Customer Success Story

Location: Portugal

AMI transforms automotive textile production with advanced water reuse UF-RO system

Manufacturing companies seek to adopt more efficient water management practices including water reuse initiatives.

Challenge

A global automotive textile manufacturer produces a wide range of products including large vehicle interior surfaces, baby car seats, and truck curtains.

The company faced a challenge with water consumption within its production processes. The high water usage not only posed environmental challenges but also increased operational costs and regulatory compliance pressures.

The company wanted to reduce its environmental footprint and promote more responsible water management practices across its global operations.

The goal was to implement a reliable water reuse plant for the client's operations. The water to be treated was contaminated with solvents and oils.

Applied Membranes was selected for this project in 2007.

Solution

Applied Membranes custom-engineered and built a state-of-the-art **double pass UF-RO** Ultrafiltration (UF) and Reverse Osmosis (RO) system.

The first pass AMI UF system produces **90 GPM (21 m3/h)**. A recycle flow of 25 GPM was included to enhance efficiency and conserve water resources.

The AMI UF system effectively reduces turbidity, solvents, and oils from the feedwater stream.

The second pass AMI RO system achieves the desired level of purity for the client's application. The final product rate from second pass is **70 GPM (16 m3/h)**.

A cleaning system integrated into the second pass not only facilitated routine maintenance but also served as a permeate flush, optimizing system performance.

Key Features:

- Antiscalant
- Chemical injection system
- Clean-in-place system
- Programmable Logic Controller (PLC)
- Permeate tank

Results

Applied Membranes provided a reliable and efficient water technology solution to the client. Skid-mounted onto a single frame, the AMI system offers compact footprint and simplified installation.

Custom engineering: AMI in-house engineers analyzed the client water analysis and specifications. The entire system was custom engineered to meet the client's unique requirements.

Longevity: In 2025, the customer emailed AMI stating: "*We purchased this UF-RO system from you in 2007. The system we purchased is still in full operation in 2025; it was installed at one of our clients' facilities under a 10-year contract. We currently use this equipment for industrial testing, and it performs well in recovering wastewater. We now have another project for you.*"

Water reuse: By effectively treating and reusing water, the client realized significant water and cost savings while minimizing environmental footprint and meeting regulatory compliance.

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