

Industry Focus CASE STUDY: Textile, Turkey

Project Specifics:

- Ultrafiltration Unit : 4 x 220 m³/h
- Sea Water RO Unit : 2 x 239 m³/h
- Brackish Water RO Unit : 2 x 219 m³/h
- 3 Pass Polishing RO Unit : 2 x 133 m³/h
- Electrodeionization Unit : 3 x 70 m³/h

The Challenge:

For sustainability reasons, a large acrylic fiber producer in Turkey supplying its products globally decided to switch from using dam and well water to sea water in order to meet its deionized and boiler feedwater requirements.

Within the first year of operation, plant operators were applying various multi-product cleaning programs to the reverse osmosis membrane plants consisting of both commodity and specialty cleaning chemicals, albeit producing inconsistent results.

In 2017, the OEM who supplied the RO membrane plants and the customer began working with Genesys to review the high cost of membrane cleaning programs and irregular practices.

The main challenge for Genesys was to consistently improve the performance of the permeate flowrate for the two BWRO trains that were periodically falling below 200 m³/h.

Innovative and Consultative Approach:

As proven specialists in membrane cleaning and treatment of various waters for differing applications, Genesys uses its robust knowledge of membrane fouling to design and develop client specific cleaning regimes and antiscalant chemistries based on innovative technologies. These are readily supported using an on-site consultative approach.

The Genesys Solution:

Using its innovative, patented and unique microbubble-based one-product 'Genairclean' program, Genesys were able to consistently demonstrate good cleaning results and restore the permeate flow capacity to near design levels.



Whilst on-site, a Genesys Cleaning Consultant worked closely with the plant operators during the cleaning process to ensure best practice methods were employed.

Thereafter, emphasis was placed on the importance of regularly collating operational data in order for the Genesys Consultant to normalize the data from which Performance Reports were produced.

The subsequent and regular interpretation of the performance reports now help to schedule the cleanings when normalized performance parameters dictate it.

Genesys Added Value:

- Reduced a multi-cleaner program to a one-product solution
- Shorter cleaning program for operators to apply and manage
- Increased plant availability

Sustainability:

Genesys has a verified track record of improving the performance management of RO plants within a variety of industries, working with all stakeholders to develop cost-effective and sustainable solutions.