From Safe to Premium with DuPont™ FilmTec™ Nanofiltration

GLOBAL WATER AWARDS

The challenge

Zhangjiagang, a city along the coast of China and the Yangtze River, has been upgrading its conventional drinking water treatment process with advanced technology to improve the safety and quality of drinking water and transform from supplying Safe Water to Premium Quality Water.

The solution

FilmTec™ Nanofiltration (NF) elements were selected for the expansion of Zhangjiagang No. 4 and No. 3 Water Treatment Plants project to remove organic compounds from surface water and produce premium quality of drinking water. The NF system is designed in a 3-Stage pressure vessels array configuration running at maximum 90% recovery.

The benefits

The two water plants' NF systems have a combined treatment capacity of 400,000 cubic meters per day. They can achieve over 90% of TOC rejection and over 90% of color rejection in permeate. This marks the first instance of a large NF municipal project (>100,000 m^3/day) in China being used for the removal of organic pollutants from surface water. The project has been selected as China's urban water supply typical project case database and has been recognized as the 'Water Project of the Year' at the Global Water Awards 2022.

Fast Facts

Location: Zhangjiagang, China

End-user: Zhangjiagang Water Company Limited

Application: Organics Removal

Product: FilmTec™ NF270

Technology: Nanofiltration

Feed water source:
Yangtze River Water

NF plant capacity:
400,000 m^3/day

Start-up date:
2020- No.4 DWTP Expansion
2021- No.3 DWTP Upgrade
2022- No.4 DWTP Upgrade

Temperature range: 4-30 °C

400,000 m^3/d capacity

First large NF municipal project in China for the removal of organic pollutants from surface water

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