Solvay’s Solef® PVDF optimizes new ultrafiltration membranes

Alpharetta, Ga., February 25, 2019 --- Solvay announced that Scinor Beijing Membrane Technology chose Solef® PVDF to optimize its TIPS membrane technology. TIPS – for Thermally Infused Phase Separation – has applications in reverse osmosis pretreatment as well as industrial and drinking water applications. The excellent chemical resistance of Solef® polyvinylidene fluoride (PVDF) was one key factor in Scinor’s decision, as well as Solvay’s exacting suspension polymerization process for the material, which makes it possible to produce homogenous, linear fibers that are ideal for TIPS and similar ultrafiltration processes.

“PVDF polymers have become an increasingly favored material for ultrafiltration due to the polymer’s resistance to cleaning agents and the relative ease with which it can be processed into hollow fibers,” said Zhao Jie, CEO of Beijing Scinor Membrane Technology. “Solvay’s Solef® PVDF stood out for its superior quality, narrow molecular weight distribution and more uniform bulk density – all of which enabled Scinor to achieve more stable extrusions that helped optimize the performance and reliability of its patented TIPS membranes. The high quality and performance of Solef® PVDF helped foster over 550 applications of Scinor’s technology worldwide.”

Scinor’s TIPS technology offers a unique, new alternative to more conventional Non-solvent Induced Phase Separation (NIPS) solutions. Unlike NIPS, TIPS filters are isotropic, meaning their mechanical properties are more uniform throughout the membrane structure. Due largely to the consistent quality of high-performance Solef® PVDF, this uniformity translates into lower fiber breakage and more consistent, reliable filtration. The end result is that Scinor’s TIPS membranes can deliver higher flows while consuming less energy.

“Solvay’s commitment to sustainability and the environment is demonstrated through its collaboration and technical support for leading industry innovators like Scinor Beijing Membrane Technology, whose advanced TIPS technology is driving unique new solutions in high-volume, low-energy water filtration,” said Brian Baleno, business development manager for Industrial, Energy and Environment at Solvay’s Specialty Polymers global business unit. “This commitment is enabled, in part, by our unmatched portfolio of sulfone polymers and fluoropolymers for advanced membrane applications.”

Solvay’s Solef® PVDF and Scinor’s TIPS membranes are commercially available worldwide.

* Solef is a registered trademark of Solvay

Beijing Scinor Membrane Technology is an integrated corporation with capabilities in research and development of membranes, equipment manufacturing, and engineering design. With experience in system integration and diverse water applications, we can provide customers with custom integrated and comprehensive solutions for water treatment.

We make great efforts in building world-class advanced water technology platforms. We utilize the most advanced water treatment technology in the world, promote the development of local water markets, integrate and apply advanced technologies, develop the international market of domestic membrane products and technologies, and continuously explore the sustainable development of water resources.
Solvay is an advanced materials and specialty chemicals company, committed to developing chemistry that addresses key societal challenges. Solvay innovates and partners with customers worldwide in many diverse end markets. Its products are used in planes, cars, batteries, smart and medical devices, as well as in mineral and oil and gas extraction, enhancing efficiency and sustainability. Its lightweighting materials promote cleaner mobility, its formulations optimize the use of resources and its performance chemicals improve air and water quality. Solvay is headquartered in Brussels with around 26,800 employees in 61 countries. Net sales were €10.1 billion in 2017, with 90% from activities where Solvay ranks among the world’s top 3 leaders, resulting in an EBITDA margin of 22%. Solvay SA (SOLB.BE) is listed on Euronext Brussels and Paris (Bloomberg: SOLB.BB - Reuters: SOLB.BR) and in the United States its shares (SOLVY) are traded through a level-1 ADR program. Financial figures take into account the announced divestment of Polyamides.


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Scinar Beijing Membrane Technology chose Solvay’s Solef® PVDF to optimize its thermally induced phase separation (TIPS) membrane technology, which has applications in reverse osmosis pretreatment as well as industrial and drinking water applications. Solef® PVDF’s narrow molecular weight distribution and more uniform bulk density enabled Scinar to achieve more stable extrusions that help optimize the performance and reliability of its TIPS membranes. Photo courtesy of Scinar.