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HYDRANAUTICS

PRESS RELEASE

Hydranautics IMSDesign Cloud Update:

Launch of K4R-PW1 Simulation for Optimized WFI Production

Hydranautics – A Nitto Group Company is proud to announce an innovative enhancement to its IMSDesign Cloud platform. The new feature introduces the K4R-PW1 UF Module Performance Simulation, specifically designed to optimize Water for Injection (WFI) production for pharmaceutical applications. With this innovative upgrade, Hydranautics becomes the first and only membrane company to offer this advanced simulation capability, setting a new standard for precision, flexibility, and user-friendliness in water treatment system designs for industries like pharmaceuticals and biotechnology.

The K4R-PW1 module is a 6000 MW Dalton polysulphone, capillary hollow fiber membrane in an outside-in flow configuration. The module ensures the highest purity of water, meeting the stringent endotoxin limit of <0.25 EU/ml, and serving as a critical tool for WFI production in compliance with global standards. The simulation report offers detailed technical analysis on the performance of the K4R-PW1 module for WFI production. It highlights essential operational parameters, filtrate quality, necessary equipment, and sanitization procedures, ensuring adherence to global pharmaceutical water treatment standards.

The new simulation tool offers system designers and engineers a comprehensive approach to WFI production, making it easier to plan and optimize their systems for top-tier performance.

Some key capabilities include:

- ✓ **Accurate Performance Modeling**: System designers can now simulate K4R-PW1 module performance, including key parameters like filtrate flow, pressure drop, and recovery rates.
- ✓ **Optimized System Configurations**: Designers have the option to streamline their systems to ensure maximum efficiency and performance in the production of pharmaceutical-grade WFI.
- ✓ **Simulated Operational Conditions**: Users can model operational conditions such as feedwater quality, temperature, and pressure to provide accurate system predictions.
- ✓ **Hot Water Sanitization Planning**: The simulator features the option to model hot water sanitization cycles, ensuring system durability alongside strict adherence to pharmaceutical sanitation requirements.

Hydranautics' focus on innovation is reflected in this upgrade, which allows system designers to design optimized, compliant pharmaceutical water treatment systems. With the inclusion of K4R-PW1 module simulations into IMSDesign, Hydranautics remains committed to delivering innovative membrane technologies for industries such as pharmaceutical and biotechnology.

For more information, please visit www.membranes.com or to check out the upgraded IMSDesign Cloud, visit www.imsdesign.com

ABOUT HYDRANAUTICS

Hydranautics, a member of the Nitto Group, is a global leader in innovative membrane solutions. We provide comprehensive membrane technologies, including reverse osmosis, nanofiltration, and microfiltration, for water, wastewater, and process treatment applications. Our membrane-based solutions are utilized across seven continents in various fields such as seawater desalination, industrial high-purity water production, surface water treatment, wastewater treatment, and specialty process applications. Our Global Membrane Division is headquartered in Oceanside, CA, USA, and we operate two state-of-the-art manufacturing facilities in Oceanside and Shiga, Japan. For more information about Hydranautics, please visit our website at www.membranes.com.

ABOUT NITTO

Nitto is Japan's leading diversified materials manufacturer. Based on four core technologies: adhesion, coating, polymer function control, and polymer analysis & evaluation, Nitto provides customers with various products such as polarizing films for displays, industrial adhesive tapes, reverse osmosis membranes for desalination and transdermal drug delivery patches. Under the brand slogan of "Innovation for Customers", Nitto contributes to a better life by solving social issues and improving corporate value. For further information on Nitto please visit www.nitto.com

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