New WEDECO AOP Solution from ITT targets Micropollutants



Growing concerns among scientists, public health agencies, government officials, and the public have prompted added interest worldwide in the potential health effects of increasingly common chemical contaminants that have been finding their way into our water supplies. These contaminants are used in everything from industry to agriculture to medical care.

To address this challenge, ITT Corporation, a global leader in the treatment and transport of water and wastewater, announced that it has launched a new Advanced Oxidation Process (AOP) concept for the destruction of these micropollutants. The new MiPRO[™] process will be marketed under ITT's WEDECO brand name.

Among emerging contaminants of the most concern in recent years are organic/inorganic substances such as NDMA, MTBE, 1,4-dioxane, pesticides, pharmaceuticals and personal care products (PPCP's) and other endocrine disrupting compounds (EDC's), as well as those that contribute to total organic carbon (TOC) and chemical oxygen demand (COD) loading.

AOP solutions typically involve a combination of technologies that can include ozone (O₃), ultraviolet (UV) light, and hydrogen peroxide (H₂O₂) – usually as O₃/H₂O₂, UV/H₂O₂, or all three agents together.

"We're the first supplier on the market to offer all three methods from a single source – and even in a single solution," noted Peer Krueger, Marketing Director for Disinfection & Oxidation within ITT Water & Wastewater's treatment unit. "Our emphasis, though, is on the first as a more effective and economical option." The efficiency and cost effectiveness of an AOP system is highly dependent on the contaminants to be removed and the technology used for treatment. By offering both UV and ozone based AOP systems, ITT can determine the most cost-effective solution based on the site-specific treatment requirements of its customers.

ITT's Water & Wastewater business will supply the WEDECO $\mathsf{MiPRO^{IM}}$ solution in three configurations:

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• MiPROTM eco3 – a WEDECO ozone system, H_2O_2 dosing unit, an injection/reaction unit and residual ozone destruction system

- MiPROTM photo a WEDECO UV system and H_2O_2 dosing unit
- MiPROTM eco3 plus a WEDECO ozone system, H_2O_2 dosing unit, an injection/reaction unit, residual ozone destruction system and a WEDECO UV system

Krueger underscored the fact that depending on the site-specific requirements the total cost of ownership of ITT's MiPROTM eco3 option can be as low as one-fourth the cost of typical medium pressure UV and H_2O_2 options available on the market today.

"We want to point out that there are more alternatives than medium-pressure UV and hydrogen peroxide when thinking of advanced oxidation processes as other choices may be more efficient and cost-effective, providing a faster return on investment for those considering AOP for their water or wastewater treatment needs," Krueger said.

ITT has been supplying AOP solutions developed at its research and development laboratories in Herford, Germany for more than a dozen years. This WEDECO MiPROTM concept – i.e., the unique combination of its ozone and H_2O_2 approach – was developed largely over the past year.

About the Advanced Oxidation Process

An Advanced Oxidation Process (AOP) is the combination of two or more processes to generate or increase the number of hydroxyl radicals (OH radicals). The OH radicals, typically formed by utilizing combinations of Ozone, UV, and Hydrogen Peroxide, have a considerably higher oxidation potential compared to other oxidants. Due to their oxidative strength, hydroxyl radicals are very effective in the destruction of a variety of organic and inorganic contaminants. The use of AOP solutions is also effective in water reuse applications.

About ITT's Water & Wastewater Business

ITT's Water & Wastewater business is a global provider of water handling and treatment solutions for municipal and industrial customers in more than 140 countries. ITT designs and delivers energy-efficient solutions and related services for water and wastewater transport, biological treatment, filtration and disinfection. The Water and Wastewater business employs a global sales network, has manufacturing sites in Europe, Asia and the Americas, and is based in Stockholm, Sweden. www.ittwww.com

About ITT Corporation

ITT Corporation is a high-technology engineering and manufacturing company operating on all seven continents in three vital markets: water and fluids management, global defense and security, and motion and flow control.



With a heritage of innovation, ITT partners with its customers to deliver extraordinary solutions that create more livable environments, provide protection and safety and connect our world. Headquartered in White Plains, N.Y., the company generated 2009 revenue of \$10.9 billion. www.itt.com

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