

TANCS® Steam Vapor Granted U.S. Patent

The technology behind TANCS®, the hard-surface steam vapor disinfection system pioneered by Edmonds, WA-based Advanced Vapor Technologies (AVT), was recently granted U.S. Patent No. 7,547,413 by the U.S. Patent and Trademark Office.

Seattle, WA ([PRWEB](#)) August 25, 2009 -- The technology behind TANCS®, the hard-surface steam vapor disinfection system pioneered by Edmonds, WA-based [Advanced Vapor Technologies \(AVT\)](#), was recently granted U.S. Patent No. 7,547,413 by the U.S. Patent and Trademark Office.

The patent, awarded to [Bauer Energy Design, Inc.®](#), includes claims to an enhanced type of steam vapor that can effectively kill a broad range of microorganisms within 3-5 seconds, reduce surface-mediated infection risks, and serve as a green, more effective alternative to chemical disinfectants.

"Our system has applications in industry, including health care, livestock farms, meat processors, food manufacturers, food service facilities, schools and universities, as well as in domestic households," Walter J. Bauer, president of Bauer Energy Design, said.

Increased concern over chemical disinfectants and their effects on human health and the environment have led to restrictions and in some cases elimination of their use in certain settings. But the continued impact of surface-mediated infectious disease transmission - most recently the novel H1N1 virus, or "swine flu" - demands that disinfection measures be frequently taken, especially in environments occupied by susceptible populations, e.g. hospitals, schools, nursing homes, etc.

The TANCS, or Thermal Accelerated Nano Crystal Sanitation, steam vapor system developed by AVT, works by facilitating the redistribution of charges between the water molecules and dissolved mineral components naturally found in potable tap water. This environment supports subtle changes within the water, resulting in part, in the development of nano crystals. This enhanced water is then transformed into super-heated low-moisture steam, and the resultant steam vapor is effectively used to clean and disinfect hard surfaces. This process has been shown to provide very effective and rapid disinfection across a broad range of pathogenic organisms.

By eliminating the need for special customized chemicals or highly toxic chemistries, the TANCS steam vapor system dramatically reduces the negative environmental impact of disinfection while allowing it to be performed in environments and areas where previously it may not have been a viable solution.

"We are very pleased and excited that the U.S. Patent and Trademark Office has awarded a patent to this important process," says Rick Hoverson, principal of AVT. "This patent confirms that the TANCS process is new and unique, and that not all steam is created equal. Using 'tap water' as a disinfectant has a number of terrific benefits that directly relate to maintaining a healthy indoor environment, sustainability, reduced waste streams, simplified application protocols and cost reductions."

Even in areas that allow for the conventional use of chemical germicides, the standard surface application techniques may not result in the desired outcome. Proper use of traditional chemically-based disinfection requires a thorough understanding of the limits of the formulation being used, what the target organisms are, the physical properties of the surface being treated, required application protocols, proper mixing, and strict adherence to the instructions provided on product labels, just to name a few areas of concern.

"The TANCS patented process has been shown to be effective against a broad range of pathogens while using simplified protocols. The associated short dwell times are ideal, as well as being effective, when a schedule of frequent application is required, especially on vertical or irregular shaped 'high touch' surfaces," says Rick Hoverson.

A peer reviewed article detailing the results of disinfecting hard surfaces with the TANCS steam vapor system was published in the [February 2009 issue of the American Journal of Infection Control \(AJIC\)](#).

About Advanced Vapor Technologies:

Advanced Vapor Technologies' proprietary TANCS steam vapor system is scientifically proven to rapidly eradicate MRSA, VRE and C. difficile spores and many other microorganisms. The process is safer and faster than chemical disinfectants, is non-consumptive and uses clean, green technology. For more information visit [AVT](#). Or call toll-free 1-800-997-6584.