TENCATE ADVANCED ARMOR

Press Release

Marketing communication

TenCate Advanced Armor introduces the Cratus™ Wave, a thinner Level III ballistic plate and debuts *Trauma Reduction Technology* for future lighter, thinner, cooler armor at AUSA 2022

TenCate Advanced Armor USA, Inc. today introduced the Cratus™ Wave, a body armor ballistic insert that is thinner than other ultra-lightweight commercially available stand-alone Level III inserts available today and offers the added potential benefit of reducing heat stress.

This product inaugurates TenCate Advanced Armor's game-changing Trauma Reduction Technology, a patented process that will be used to make thinner plates designed to stop rifle rounds.

TenCate Advanced Armor introduces the product and its new technology at AUSA 2022, the Association of the U.S. Army's 2022 Annual Meeting and Convention opening today at the Walter E. Washington Convention Center. Attendees are welcome to visit Booth 2543.

Trauma Reduction Technology is a patented design that redirects the pressure wave trapped between the wearer and the hard armor plates that are inserted into the front and back pockets of body armor carriers, thereby reducing the back face deformation.

Game Changer

"This technology will be an exciting game changer for military and law enforcement," said Andrew Bonham, president of the Virginia-based company, "but adoption by the Army will require changing present-day specifications."

The technology is a wave of precisely formed grooves on the side of the plate closest to the wearer. These grooves redirect the pressure wave created by a projectile as it strikes the plate.

"The rapid dispersion of energy reduces the force that translates to blunt trauma. Thus, we can keep plates the same and reduce the trauma or redesign the plate and reduce the thickness as we have with the Cratus™ Wave introduced today," Bonham said.

"TenCate Advanced Armor has demonstrated the Cratus™ Wave meets NIJ Level III test specifications, and expects to receive official certification soon," he added.

Energy from a stopped bullet is a hammer-like blow that dents a clay block used in testing to represent the human body. Trauma Reduction Technology reduces back face deformation (BFD), a metric the industry uses as a surrogate for physiological blunt trauma which may occur when a bullet is stopped.

The BFD is the indentation ballistic energy wave makes in the clay block.

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A Step Ahead
“Until today, improvements in armor plates have been incremental with little significant differentiation among competing models,” said Jason Kruise, personal protection segment leader. “Using data from Army video X-rays, we could see the shockwave and how it was trapped, and we asked, ‘Why can’t we vent that energy?’”

“This technology is the right solution at the right time,” Kruise continued. Suppliers of ingredients that are used to make the armor composites have signaled they are about to introduce a new generation of materials which will help make armor even lighter.

Meanwhile, the National Institute of Justice (NIJ) has a new performance standard pending. “These new materials, TenCate Advanced Armor’s Trauma Reduction Technology, and a new NIJ standard should result in a new generation of rifle round protection for both law enforcement and defense groups that rely on NIJ certifications,” he added.

For the U.S. Army and military commands, The Trauma Reduction Technology holds powerful potential, said Kruise

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TenCate Advanced Armor is a leading global supplier of a wide range of armor composite materials for ballistic protection. TenCate Advanced Armor develops and manufactures a portfolio of composite and ceramic materials and designs passive armor and active solutions for the protection of police, army, air force, navy and civilian service personnel, vehicles, aircraft, and vessels. TenCate Advanced Armor has facilities in North America, Europe, and Asia.