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Force protection is our mission – Rheinmetall offers advanced protection technologies to meet evolving threats

New Hybrid Active Protection Module Exhibited for First Time in US; Next Gen Rapid Obscurant System (ROSY) Featured

At this year's Annual Meeting & Exposition of the Association of the United States Army (AUSA), Rheinmetall is showcasing a selection of its world class protection products and capabilities. Examples of Rheinmetall expertise on display at AUSA will include both Hardkill and Softkill active protection systems. Visitors to the show will have the opportunity to see the company's Rapid Obscuring System ("ROSY"), which underwent initial testing with the US Army this year, as well as a new hybrid modular version of Rheinmetall's StrikeShield Active Protection System that can deliver leap ahead survivability by integrating APS and passive armor solutions for less heavily armored vehicles, like the Stryker. This is the first time that Rheinmetall has exhibited its new hybrid APS design in the USA.

StrikeShield

Rheinmetall Protection Systems and Unified Business Technologies (UBT) of Troy, Michigan will once again showcase the StrikeShield Active Protection System (APS) on the Rheinmetall booth. Rheinmetall Protection Systems and UBT have partnered to offer this advanced APS to the US Army including participating in a recent US Army APS rodeo. The Rheinmetall Protection Systems and UBT team expect the US Army to make contract awards for more advanced testing for the StrikeShield system very soon.

StrikeShield belongs to a new generation of standoff active protection technologies. It is one of the world's most advanced and effective systems for protecting military vehicles of practically every weight class from operational threats, especially light antitank weapons, guided missiles and certain improvised explosive devices (IEDs).

The system is based on the hard-kill principle, in which incoming projectiles are detected and instantly destroyed by directed energy immediately before reaching their target. It is the only high-performance close-in defense system minimizing collateral damage near the vehicle.

Unveiling New, Advanced Hybrid Protection Module APS Solution

At AUSA 2019, Rheinmetall will also display for the first time in the US a new full-scale mock-up of the StrikeShield APS in a modular hybrid configuration that combines the company's active and passive protection technologies in a single integrated design. This approach draws on Rheinmetall's unique expertise as a provider of both APS and armor protection, and the company's proven track record as a leading vehicle supplier and system integrator. This hybrid protection concept leverages Rheinmetall's experience while also providing a protection system that is optimized to reduce weight and space requirements. The system's hybrid and modular design is well suited for integration on both tracked and wheeled vehicles and can address survivability challenges in less heavily armored vehicles for which an APS solution alone may not adequately enhance survivability.

Hybrid protection modules allow for an integrative approach: passive protection components simultaneously serve as interface and shield for the components of the active protection system. Conversely, the StrikeShield APS components comprise ballistic functions and characteristics. The external protection layer protects these components against shell fragments, small arms fire and other sources of mechanical stress. The StrikeShield countermeasures are embedded in the first protection plate from the outside and serve simultaneously as part of the first layer of passive protection. The sensors of the system are contained in the space in between.

In stand-alone mode, the complete module already offers additional ballistic protection that significantly enhances the basic integrity of the vehicle hull. As a fully integrated system the hybrid APS is effective against rocket-propelled grenades and anti-tank guided missiles.

The prime advantage of this new possibility for StrikeShield integration into tactical vehicles is its compact size, which saves weight and space. Moreover, it is relatively simple to install and can be mounted onto existing vehicles. The module thus offers an easy-to-implement means of adding active protection technology to a platform. The new modules can replace existing add-on passive protection elements either completely or in select and more critical areas.

Thanks to variable material configurations, Hybrid Protection Modules can be readily adapted to be meet individual customer requirements. Rheinmetall has already fabricated various modules, successfully testing the system against threats ranging from light arms to anti-tank guided missiles.

Rapid Obscurant System (“ROSY”)

Rheinmetall’s Rapid Obscurant System or “ROSY” is an advanced protection solution that deploys a nearly instantaneous smokescreen for vehicles under enemy watch or threat. Unlike conventional obscurant systems, ROSY produces an effective cloud within one second of firing. In addition, ROSY is able to provide multispectral screening over a large area and the capability to fire multiple salvos without reloading. This allows a targeted vehicle to remain protected while moving away from a threat. To date, ROSY has been fielded by 11 countries and is deployed in both land and naval environments. In July of 2019 the US Army conducted a Foreign Comparative Test of the ROSY at Aberdeen Proving Grounds. Results of this FCT are anticipated by year-end as the Army considers ROSY for possible future fielding on ground vehicles under the Modular Active Protection (“MAPS”) program.

For more details about Rheinmetall’s protection and survivability solutions, you can meet our team of specialists on booth No. 6618 at AUSA 2019.

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