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Softkill protection systems by Rheinmetall: Growing customer base for state-of-the-art protection at sea and on land

Rapid technological advances are making intelligent weapon systems smarter and deadlier than ever. Rheinmetall has specialized for many years in developing and producing high-quality components and innovative systems for protecting people, vehicles, aircraft, ships and installations, and offers a wide range of highly effective active, passive and softkill protection solutions. A growing customer base underlines Rheinmetall's experience and competence in this field. Visitors to LAAD 2013 can view three of the company's advanced passive protection systems: Multi Ammunition Softkill System (MASS), MASKE 66/76mm and the Rapid Obscurant System (ROSY).

Rheinmetall MASS: piggyback naval countermeasure system for added punch

Rheinmetall's Multi Ammunition Softkill System (MASS) protects ships from attacks with modern, sensor-guided anti-ship missiles on the high seas and littoral zones as well as from asymmetric, terrorist-type threats by firing decoy rounds which diverts incoming missiles from their intended target.

MASS has proven highly effective in various international trials. The system's innovative, programmable omnispectral rounds – 32 per launcher – assure protection in all relevant wavelengths of the electromagnetic spectrum (radar, infrared, laser, electro-optic, ultraviolet). MASS can be installed on board any type of ship, and operates either in standalone mode or as an integral part of the ship's networked C4I and weapon engagement systems.

In addition to the standard MASS configuration, Rheinmetall offers two optional versions, MASS_DUERAS and MASS_ISS.

The MASS_DUERAS is a piggyback solution. It features launching tubes for distraction rockets mounted on top of the MASS launcher. Anti-torpedo distraction rockets will also be available soon. In 2009 Canada chose the MASS_DUERAS as standard equipment for the upgrade program of its Halifax-class frigates.

Featuring built-in sensors for detecting radar, laser and electro-optical threats, the MASS Integrated Sensor Suite (ISS) configuration has now been extended to include "NavGuard", an active missile approach warning device. It is capable of detecting small incoming guided missiles such as MILAN, Sagger or Fagott, and thus closes a vulnerability gap when it comes to protecting vessels in littoral zones.

MASS offers a whole host of tactical, operational and logistical advantages, and is specifically designed to meet the changing requirements of modern navies, with abundant scope for future technological growth.

The procurement statistics bear this out. Since its market launch in 2002, thirteen nations have ordered a total of 200 MASS launcher systems for no fewer than 25 different types of vessels. One of the latest customers is the Algerian navy which has procured two MASS_4L for the Meko A200 frigates, each with a four launcher configuration and the long range firing and distraction capability MASS_DUERAS.

MASKE 66/76 mm

The MASKE 66/76 mm is a combat proven IR smoke screening grenade that significantly reduces the enemy's hit probability by interrupting the line-of-sight (LOS) in the visible and infrared wavebands. It protects vehicles from visual and infrared observation and sensor-guided weapons including laser beam-riders, laser illuminators and laser range-finders. MASKE is based on a bi-modular, multi-spectral ammunition concept consisting of a rapid-reaction jamming module producing intense over-radiation, coupled with a long-duration module generating visual and infrared screening. MASKE 66/76 mm is in service with several South American armies.

Bullfighter decoys

The latest generation of Bullfighter decoys reliably protects ships up to the size of frigates from anti-ship missiles equipped with radio frequency (RF) and infrared (IR) seekers. They can be used in existing Super Rapid Bloom Offboard Countermeasures (SRBOC) and other 130mm systems.

Bullfighter generates a radio cross-section (RCS) density six times greater than that of other systems. Moreover, its IR payload replicates a typical ship signature in all IR wavelengths. This assures Bullfighter's effectiveness – demonstrated in numerous trials – against all conventional infrared seekers, including two-colour IR seekers and electronic counter-countermeasures (ECCM).

Bullfighter is already in service with the navies of Germany, Poland, Portugal, Spain and Malaysia. And recently in a tender process the Colombian MOD chose the Bullfighter to protect the Almirante Padilla class frigates against attacks with Radar- and IR guided anti-ship-missiles.

Rheinmetall Rosy: State-of-the-art protection at sea and on land

Rheinmetall's 40mm Rapid Obscurant System (ROSY) is a countermeasure system designed for both naval and land applications.

The land version – the ROSY_L system – provides light military and civilian vehicles with 360° protection from unexpected attacks by countering conventional weapons, weapons with optical devices and laser rangefinders (TV-, EO-, IR-, IIR-, laser- and SACLOS-guided weapons). Unlike conventional smoke protection systems, ROSY not only produces an instantaneous, large-area, multispectral interruption of the line of sight in a fraction of a second, but also generates a dynamic smoke screen, capable of providing vehicles on the move with sustained protection from multiple attacks.

The naval version ROSY_N is optimized for protecting small vessels such as fast attack craft, patrol vessels and rigid hull inflatable boats (RHIB). ROSY_N creates a 1,000 square-metre multispectral smoke screen in just 0.4 seconds and can counter multiple threats without reloading. This helps to protect sailors, coast guards and special operations forces units operating in coastal waters and on rivers to defend themselves from sudden flat trajectory fire, such as small arms fire, RPGs and missiles.

Just recently the Peruvian Navy has equipped six of its Griffon GH-2000 TD(M) hovercrafts with ROSY_N to protect them during operations in the Amazon region to suppress drug trafficking.

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