

NEW CHALLENGES FOR WARHEAD SYSTEMS

By: Sakha Pramod

KLAUS WÖLKI, Business development, Technology Development Warhead Systems (TDW) of Germany, outlines the changing face of modern warhead systems to National Shield Journal

What are the new technologies that you have at present ?

The tasks of our armed forces have changed and represent new challenges to modern warhead systems. While in the past, maximum effect used to be the first priority, controllable effect is strived for now to avoid unintended damage to civil facilities for example.

Besides high impact accuracy, this aim requires modern warhead systems which work with new methods to intelligently create and control the effect in the target. Our engineers apply lots of effort to develop systems which assure precise performance in the target and avoidance of damage to infrastructure in the vicinity.

Our "Scalable Effects" technology advanced us worldwide. It allows adjusting the effect of a warhead system to its mission requirements.

Multi-effects warheads are being investigated. They allow changing over to several effect mechanisms according to the target encountered. Tandem shaped charge, blast/fragment and penetration capacities are combined to represent a complex warhead system within limited space.

With this, flexibility can be increased as high efficiency is obtained against a broad target spectrum. Another advantage is that effort for integration and logistics is reduced as a missile carrying such a universal warhead replaces several specific effectors. Finally, this provides cost savings.



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What factors differentiate your products from your competitors?

At present, TDW is the European market leader with warhead systems for complex guided weapons. We consider US American companies our most important competitors. They bring high quality to the market. However, concerning quality, competency and flexibility we feel we shape up well.

As an affiliated company of the missile system supplier MBDA, we exactly know trends and customers' requirements. Our warhead systems vitally contribute to the performance capacity of a large variety of modern systems - for example the guided weapons like Meteor, Brimstone 2, TAURUS KEPD350, RBS15Mk-3 and Sting Ray.

Do you share technology?

TDW has acquired a good reputation nationally and internationally in terms of quality and reliable deliveries. We are said to be a dependable partner. Our European group mother company MBDA

and other leading system companies in Europe are among our customers and rely on our products.

On the other hand, we place sub-contracts with foreign component and sub-system suppliers as far as this is required to fulfil work share conditions or in case there are other advantages. So, we are ready to share technology under the premise "give and take".

Could you explain in detail your flexible response warheads, especially the scalable effect warheads?

Latest battlefield scenarios, especially military operations in urban terrain, require that a single weapon system offers high precision and flexibility in terms of the required effect.

To fulfil these criteria, TDW developed a family of flexible response warheads. They are: switchable mode warheads (dial-a-mode), scalable effects warheads (dial-a-yield), aimable warheads (dial-a-direction) and multi-effects Warheads (dial-an-effect).

Our Scalable Effects technology advanced us worldwide. It allows adjusting the effect of a warhead system to its mission requirements. This is the only way of preventing unintentional damage. The technology is based on a remarkable concept: what is detonated is not the entire available explosive in the warhead, but just a preselectable proportion of it to meet the requirements. The remainder is suitably prevented from detonating and is modified to ensure that no residual explosive is left over - a unique way of managing layered detonation and deflagration of high explosives. during the next IDEX Exhibition will present some new products dedicated to neutralizing FIAC targets or intelligent fuzing systems for deep penetration.