

SUCCESS STORY

TOPIC NUMBER: N122-132

SBIR INVESTMENT: \$1,553,504

PHASE III FUNDING: \$17,810,303



ADVANCED BALLISTIC SHIELDING FOR CREW SERVED WEAPONS STATIONS

Kinetic Protection's reconfigurable advanced composite ballistic shields are designed for robust force protection aboard Navy surface vessels.

Kinetic Protection

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THE CHALLENGE

The Navy has an interest in the development of lightweight, durable reconfigurable and non-reconfigurable ballistic shields for crew served weapons stations (CSWS) aboard Navy vessels, including CVN 68 class ships. Existing commercial ballistic shields did not provide the needed level of ballistic protection and were too heavy to be rapidly reconfigured as shipboard operations dictate. NAVSEA sought an innovative solution to protect weapons station crew from close-in attacks, not only exceeding what is currently available in terms of ballistic defeat, but addressing the difficult issues associated with human systems integration and shipboard integration and operations.

THE TECHNOLOGY

Using a unique composite materials system, Kinetic Protection developed a system of reconfigurable advanced ballistic shields designed to withstand shipboard environment and meet ballistic protection standards. Kinetic Protection also developed a non-reconfigurable, permanently deployed version for applications where reconfiguration is unnecessary. The shields use a unique metal-encapsulated armor based on readily available commodity materials and produced from a mature manufacturing process.

THE TRANSITION

NAVSEA awarded Kinetic Protection a firm fixed price Phase III contract (47QFLA-21-D-0002) with a potential value of over \$28 million. Under the company's previous Phase I and II awards, they completed successful ballistic testing of full-scale prototype panels as well as environmental, shock and vibration testing to MIL-STD-3038. The goal of the Phase III contract is to field the technology via installment aboard a number of Navy surface vessels, collecting data on the shields' performance in the process in addition to refining the ballistic shield design and manufacturing process for cost effective production.

THE NAVAL BENEFIT

Kinetic Protection's ballistic shields provide an immediate improvement to force protection on otherwise unprotected locations that are often the first line of defense against close-in attacks. The shields provide robust, corrosion-resistant ballistic protection with a similar level of maintenance to existing shipboard components and three to five times the life of traditional composite armor. The shields also provide an increase to situational awareness by allowing gunners to stay in position even while under attack. Cross-platform application allows these shields to be fielded on a variety of different Navy surface vessels without extensive redesign.

THE FUTURE

The Navy has prioritized installment of Kinetic Protection's reconfigurable and non-reconfigurable ballistic shields on crew served weapons stations aboard the surface fleet. Congressional funding has been set aside for the Phase III effort, focused on installation of the shields aboard a number of Navy surface vessels and collection of data regarding their performance. Planning and contracting for shipsets aboard additional specific surface vessels as well as future hulls is ongoing.