



Oregon National Guard Chooses ENVELOP



M119A2 105mm towed howitzer

One of the first National Guard units to be fielded with the U.S. Army's new M119A2 105mm towed howitzer has chosen ENVELOP Protective Covers as its first line of defense against exposure to ravaging elements and environmental degradation. Unlike previous generations of howitzers, today's guns are expensive and state of the art.

Finding the best protection for these new assets and reducing the amount of time soldiers have to spend on low-value repetitive tasks, such as cleaning and busting rust, are high on the list of priorities for Artillery Battalion leadership. This is especially true in the National Guard where assets may sit for weeks between drills with little or no soldier attention. In the short

amount of time every month that National Guard commanders have with their soldiers, training time and value must be maximized. The ENVELOP cover will not only protect the M119A2 from the harsh environments found in places like Iraq, it will also provide unique protection in climates like the rainier and more humid north-western United States by creating a moisture-reducing micro-environment around the system.

The M119A2 is the updated version of the Army's light howitzer and is scheduled to be in service for many years. It is more reliable and capable than older versions, but costs over \$1 million per gun. Additionally, it will soon be fitted with a digital fire control system that further increases its value and complexity.

Shield Technologies designers developed the custom-fitted M119A2 cover in conjunction with TCM-Cannon and the program manager.

Covering the Oil and Gas Industry



In ever-increasing numbers, the ENVELOP Protective Covers logo is found on diverse electronic and mechanical equipment in the harshest climates and in the most out-of-the-way places. That is especially true for companies serving the oil and gas industry worldwide, as equipment becomes increasingly sophisticated — and valuable.

Shield Technologies has supplied numerous oil and gas industry companies with custom covers for equipment previously unprotected, or poorly protected, from the elements. Included are electronic control boxes on high-horsepower engines that generate significant heat of their own, adding to what are often already high-ambient

temperatures. These high cost assets, critical for automated control and monitoring, are also susceptible to corrosion caused by water intrusion, either from the elements or from periodic wash cycles required by adjacent power equipment. ENVELOP Protective Covers easily meets these challenges, shielding equipment from the elements, keeping it dry, corrosion free, and even resistant to the greenhouse effect prevalent with other cover technology.

Shield Technologies' roots in protecting the highest technology in military markets have enabled the company to bring its patented protection to equally sophisticated commercial markets, of which the oil and gas industry is just one.



M777 howitzer

Tips for Using M777A2 Cover

The M777 is a superb weapon and an enormous improvement over previous howitzers; for instance, it is the first towed howitzer to have on-carriage electronic fire control equipment. As a result, the system is also much more expensive. To protect this investment long-term, nearly every M777 howitzer in service has been issued an ENVELOP cover (NSNs are listed below and available at www.envelopcovers.com).

Used consistently and correctly, these covers will provide years of outstanding protection from the elements. The ENVELOP cover is a new technology, and very different from simple canvas and vinyl covers. To ensure maximum protection for the expensive weapon and long life for the cover, follow these tips:

> **Do not expose the inside of the cover to a water source, such as a hose, rain, or wet pavement.** A large portion of the inside of the cover is designed to absorb moisture when the cover is installed, and can hold many times its weight in water. Should the cover inadvertently become waterlogged, drape it over a large object and the moisture will eventually evaporate.

> **Lift the tenting pole receptacle over obstructions when installing and removing the cover.** The tenting pole raises the cover to prevent water from pooling in the cradle area. The receptacle for the pole is attached to straps to aid installation. A crewman should stand inside the cradle area and ensure that the receptacle clears all obstacles.

> **Make sure the seam on the tube cover is on the bottom of the tube when installed.** If the seam is on top of the tube cover, large amounts of moisture can enter through the Velcro®* and degrade the performance of the cover.

> **Unbuckle and fold back the material at the front of the carriage when access to the tie-down shackles is required.** Unbuckle and separate the Velcro. Make sure to fold the excess material UNDER so that only the outer surface is exposed. This will leave enough room for tie-down cables to pass through, so that the weapon can be secured.

> **Solar battery charger cables can be used with the cover on.** The cable can be passed through the back of the cover (by the cradle). The top of the muzzle brake is an excellent location for the panel. Straps to secure the panel can be wrapped around the muzzle brake and over the cover.

> **Follow the instruction sheet included with each cover.**

> **Clean the outside of the cover with soapy water, and the inside with denatured alcohol.**

> **Do not use grease, cleaner-lubricant-preserved (CLP), or other lubricants on areas that come in contact with the cover.** The unpainted area of the tube can be sprayed with a dry, graphite-type lube, but requires no other lubricants. The inside of the tube and the breech should be cleaned in accordance with the howitzer training manual (TM), and left nearly dry.

Use of ENVELOP covers saves crew time and saves the organization money. The cover greatly reduces surface corrosion on unpainted areas — particularly

tube and breech. Crews spend a great deal of time using cloths, CLP and grease to keep these vital areas in shape. The howitzer is also protected from windblown dust and sand and the cover helps protect against sunlight/UV damage, particularly on all hydraulic and communications cabling. Consistent use of the cover will provide great benefits over many years of use.

The M777 ENVELOP cover set can be obtained through the supply system via NSN or by contacting Shield Technologies. The complete M777 cover set consists of three NSNs:

1095-01-551-1284
BREECH COVER, HOWITZER
(Includes tenting pole) Covers main body of howitzer

1095-01-551-1290
BARREL COVER, HOWITZER
Covers the barrel back to the cradle

1095-01-551-1294
HYDROSTRUT COVER,
HOWITZER (requires 2)
Covers the hydrostruts

* Velcro is a registered trademark of Velcro Industries B.V.



Covered exercise equipment

ENVELOP Protects Topside Exercise Equipment

Recently Shield Technologies Corporation answered a call from the U.S. Navy's cruiser USS ANZIO to protect a piece of newly installed exercise equipment for the ship's crew. Because of its size, this equipment had to be installed on the ship's weather decks, making it susceptible to the harsh effects of the ocean environment.

Fortunately the ship's Morale, Welfare and Recreation (MWR) chairman was also one of the ANZIO's fire controlmen who was familiar with ENVELOP Protective

Covers from his work with the weapons systems onboard. An e-mail to Shield Technologies was all that was needed to get the custom design process started. Following a visit to the ANZIO by the company's Atlantic Fleet representative to determine the size and location of the equipment, a cover was rapidly designed and produced to protect the entire weight machine. After a quick test-fitting, a finished cover was delivered and installed on the equipment.

Shield Technologies stands ready to assist with custom cover requirements, regardless of where or what the protection needs are.

CRAM Operators: ENVELOP Covers "Critical"

The U.S. Army has deployed the Raytheon Close-In Weapons Support (CIWS) system in a land-based version, designated as the Counter Rocket, Artillery & Mortar (CRAM) system. The guns are integral to the defense of targets in Iraq and Afghanistan against terrorist-launched rockets and mortars. CRAM systems are so vital to Army combat operations and soldier safety that ENVELOP Protective Covers are employed on all of the systems, from the moment they are delivered from the factory.

Lt. Chris May (U.S. Navy) recently completed a yearlong tour leading a 150-man team

that maintained and operated eight CRAM gun batteries. May recently spoke with representatives of Shield Technologies at the Surface Navy Association's national symposium. He stated, "We could not have operated our guns nearly as reliably without the ENVELOP covers," and he discussed at length how critical the covers were in reducing environmental degradation, particularly sand and debris in the harsh operational theater of the Middle East.

Additionally, Raytheon and the U.S. Navy are amending their maintenance publications to require the use of ENVELOP Protective Covers for all of these systems.

ENVELOP covers can be procured through the Federal Supply System, or directly from Shield Technologies Corporation.

ENVELOP Goes Down Under



ENVELOP Protective Covers is experiencing a well-recognized presence aboard warships the world over. The industry-leading environmental protection covers for vital equipment assets are now the only approved soft, flexible cover for use on U.S. Navy surface combatants, and can be procured through the Federal Supply System. Custom ENVELOP covers have also been delivered internationally — for ships of the New Zealand (including two Anzac frigates), Canadian and Norwegian navies — and now that ubiquitous presence includes vessels of the Australian Navy.

ENVELOP distributor, Australian Pump Industries, is working closely with the Royal Australian Navy to reduce

corrosion costs and extend the life cycle of key assets. The strategic approach for cost savings and operational effectiveness includes the procurement of ENVELOP Protective Covers for its fleet of eight Anzac Class frigates and four recently upgraded FFG-7 Class guided missile frigates, which now depends extensively on the covers to protect a wide range of topside weapons and sensor assets with excellent results.

The Australian Department of Defence is committed to major savings in the nation's defense budget and has welcomed the contribution that Shield Technologies is making toward significantly more cost effective maintenance.



Additional Covers for Canada

The Canadian Navy recently awarded Shield Technologies Corporation a contract to procure ENVELOP Protective Covers for every CIWS (Close-In Weapons System) unit in its fleet, which operates 25 of the Raytheon-produced systems. In 2005, the navy purchased ENVELOP covers for all of their ships and has been highly satisfied by the enhanced protection for their critical self-defense CIWS gun system.

Recently, the Canadian Navy upgraded all of their CIWS units to the latest Block 1B

modification. In order to protect the newly modified systems, it has procured the operational version of the ENVELOP cover for CIWS. The cover has been designed and produced by Shield Technologies for installation on the system and to remain on the guns through all phases of operations, including firing of the weapons.

The operational covers have been extensively tested by the U.S. Navy and are now included on the Approved Parts List (APL) as the only approved soft cover to be used on its CIWS systems.



ENVELOP Gun Cases

Classic Case now available for \$99

extreme heat, humidity and salinity. Through the unique, patented technology, an ENVELOP gun case offers unmatched corrosion protection by repelling moisture from the outside while at the same time wicking moisture away from the gun and expelling it when the gun is in the case.

An ENVELOP gun case offers five layers of patented protection.

- Tough, flexible, waterproof outer shell allows moisture to evaporate from inside.
- Nylon honeycomb provides shock protection and helps the case maintain its shape.
- Layer of corrosion inhibitors conditions the microenvironment inside the case.
- Superabsorbent matrix stores and releases water through the case's

outer shell, and it can also depress the humidity inside the shell, thus preventing condensation.

• Innermost layer quickly wicks any water away from the gun's metal surfaces.

Gun cases from ENVELOP Protective Covers offer hunters the added security of a 10-year guarantee. To learn more about how firearms — rifles, shotguns and pistols — can benefit from this exclusive protection, or to order one of our unique protective cases, please visit www.envelopcases.com.

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Environmental factors and climatic factors like heat and rain, or even humidity, can threaten more than a hunter's comfort. In combination, these influences can quickly and silently corrode fine firearms and hinder performance.

To defend against this damage, consider ENVELOP Protective Gun Cases. Originally developed for the U.S. military, the technology behind these cases protects sensitive equipment and guns in unstable environments characterized by

U.S. Air Force Validates ENVELOP Performance

The U.S. Air Force recently released a report detailing results of a yearlong study that independently validates the superior performance of ENVELOP Protective Covers in preventing corrosion for Aerospace Ground Equipment (AGE). The intent was to study the effects of storing vital equipment in temporary shelters, and included an analysis of both traditional vinyl covers and ENVELOP covers.

AGE units in the study were stored unused for one year with complete instrumentation and corrosion coupons. The Air Force staff collected measurements each quarter. The data gathered demonstrated that ENVELOP technology is more than ten times as effective as vinyl covers in reducing corrosion rates, and nearly 20 times as effective as shelter alone. As a result, the Air Force is considering what equipment in their vast inventory would most benefit from the use of ENVELOP Protective Covers.



Andy Parks

Marine Veteran Hired for Military Markets Ground Team

Shield Technologies Corporation is pleased to announce that Andy Parks is now part of its Military Markets ground team. The new hire reflects Shield's achievement in continuing to attract the most experienced professionals, while leading the market in the custom design and manufacture of sophisticated protective covers.

For the past five years, Parks has been on active duty with the U.S. Marine Corps. Trained as an air defense artillery officer, he spent the majority of his active duty time serving with the

infantry. In 2005 he deployed to Al Anbar Province, Iraq, in support of Operation Iraqi Freedom as an adviser to the Iraqi Army. During his deployment he received the Bronze Star Medal for valor in action against the enemy. Upon his return home, he was selected as a trainer for other adviser teams preparing to deploy. In that role he personally prepared and influenced more than 400 Marines for their demanding adviser tours in Iraq, a role he held until he left active duty in 2008.

Parks will be based in Florida and will be responsible for Marine Corps, Army, and National Guard activities in the eastern and southern regions of the United States.

"Andy will help us strengthen our relationships with the Marine Corps, and the Army and National Guard ground combat and logistics communities as we continue to address their issues with maintenance and readiness," said Tom Nelson, general manager of Shield Technologies Corporation.

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