The MBPS System Protects Soldiers While They Sleep

University of Maine-Orono

American soldiers in Iraq and Afghanistan are frequently deployed on short missions to remote regions, where it is logistically difficult to provide sandbags and concrete barriers for protection against explosives and missile strikes. To protect these soldiers in their bivouacs, the University of Maine-Orono and the U.S. Army have teamed up to create lightweight, inexpensive ballistic protection that meets the requirements for Forward Operating Base construction.

University of Maine faculty members research staff and students, H. J. Dagher, E. Cassidy, K. Goslin, and L. Parent of the Advanced Engineered Wood Composites Center at the University of Maine-Orono, with the support from the U.S. Army Natick Soldier Research, Development & Engineering Center in Natick, Mass., invented the Modular Ballistic Protection System (MBPS). Over $1.5 million in funding was provided by the U.S. Department of Defense. The technology was developed in 2006-2007, progressing from concept to field demonstration in the Middle East and Southwest Asia in less than 18 months.

> *The MBPS consists of panels of wood composite (plywood or chipboard) covered in a thermoballistic composite skin, which are mounted inside the soldiers' tents with an energy-absorbing connection system.*

These reinforced wooden shields provide immediate protection for troops at the beginning of deployment before sandbags and concrete barriers arrive. A 20-by-32 foot tent can be up-armored with MBPS in less than one hour. The reinforced plywood can also protect units on the move.

The risk of injury from explosive devices and small-arms fire is greatly reduced in tents that are up-armored with MBPS. Domestic applications include protecting federal and institutional buildings, barracks, and responding to disasters. The University of Maine is currently negotiating several production agreements to further commercialize this protective technology in the private sector.

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