



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Protective Equipment

IHPS for Mitigation of Facial Injuries, Blast Wave Propagation, and Blast Fragmentation

PM SPE is developing the IHPS with an integrated maxillofacial protection subsystem comprised of a removable mandible and visor. The IHPS maxillofacial protection subsystem protects mounted Service Members, such as turret gunners, from common blast fragments. The IHPS also leverages the lessons learned from research completed in conjunction with the University of Nebraska at Lincoln to effectively mitigate blast overpressure events under operationally relevant threat scenarios. In July 2015, PM SPE conducted limited live-fire blast testing of the IHPS maxillofacial protection subsystem at Dugway Proving Grounds in the turret of an RG-33 MRAP vehicle. These test results showed a peak overpressure reduction of 10 percent on the left side of the head (which was exposed to a greater reflective pressure hazard), 37 percent on the right side of the head, 55 percent on the top of the head, 38 percent on the back of the head, and 96 percent on the front of the head. The IHPS will maintain the increased level of blast fragmentation protection provided by the Enhanced Combat Helmet (ECH). The IHPS will provide superior protection from a wider variety of explosive threats than any previously issued standard combat helmet. Milestone C is scheduled for first-quarter FY17.