National Defense Industrial Association

40mm Grenade Improvements Panel Overview--Purpose Introduction

21 May 2009

International Infantry and Joint Services Small Arms Systems Symposium

Las Vegas, Nevada

National Defense Industrial Association

Panel Objectives

- Demonstrate 40mm Grenade Ammunition Engineering Activity
- Confirm Attention Enhancement of 40mm Grenade Ammunition
  - Design/Performance
  - Weapon Interface
- Highlight Key Product Improvement Projects
  - Approach
  - Status
  - Production Introduction Transition
- Confirm Partnership of Government and Industry
  - System Contractor Management
  - Project Partnership with Government
  - Leader-Follower Technology Transition
- Verify the Improvement Benefits are Realized by Warfighter

40mm Grenade Ammunition Design/Performance Assessment Activity

Rigorous In-Depth Engineer Rationale and Design/Performance Data Base Evolving for all 40mm Ammunition

- Baseline Design/Performance Evolving

Attention to Implementing Priority Product Improvements

- Development (New Technology, Components, Cartridges)
- Addressing Producibility Topics
- Technology Insertion

Linking the 40mm Government and Contractor Community

- Effective IPT Teams
- Addressing Needs
- Communication of Information

40mm Grenade Improvement Participants

- US Army PM--MAS
- US Army Infantry School
- US Army JMC
- ARDEC
- PEO-Soldier Weapons
- USMC
- ARL
- ATC
- 40mm Grenade Ammunition System Management Contractors
  - AMTEC Corporation
  - DSE
- Various Support Contractors

Integrated Product Teams
Linking
Technology, Development, Production
To Realize
40mm Grenade Ammunition
Improvements

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Panel Approach

- **Communicate Key 40mm Grenade Improvements**
  - Technology
  - Producibility
  - Design/Performance Data Bases
- **Panel Dialogue of 40mm Grenade Ammunition Improvements**
  - Moderator Lead
- **Questions and Answers (as time permits)**

Panel Participants

Panel Moderator --Dave Broden

Panel Members--ARDEC

Peter Martin---Project Team Lead
Art Pizza--Technical Expert --40mm Ammunition

Presenters

Mann Barrel --Adam Sorchini

Single Chamber Cartridge Case --Matthew Millar

M385A1 Composite Projectile --Christopher Summa

Shaped Charge Liner Assessments --James Grassi

Advanced Lethal Mechanism-40mm Grenades--
Jason Wasserman

40mm Grenade Ammunition Technology and Product Focus

- 40mm Grenade Weapons
  - **Low Velocity--M203, M320 etc.**
  - **High Velocity--MK19 MOD 3, MK 47 etc.**
  - **Weapon Interfaces**
- Grenade Ammunition
  - **Low Velocity Family**
  - **High Velocity Family**
  - **Product Improvements**
  - **Producibility**
- Design/Performance Baselining--
  - **Interior, Exterior, Terminal Ballistics**
  - **Reliability**
  - **Safety**
  - **Test Methods**

Establishing Interface Parameters

Establishing Technologies and Products Enabling Operational and Cost Benefits

Providing In-Depth Characterization Data Base

40mm Grenade Improvement Benefits

- **Establishing Engineering Rigor to Baseline Configurations**
- **Addressing "Lessons Learned" Improvements**
- **Assessment and Application of State of Art Technology**
- **Enabling Enhanced Producibility--Realizing Quality and Cost**

Supporting the Warfighter Objectives
40mm Ammunition
Capability, Quality, Reliability, Availability, and Affordability
Today and the Future