1 DAY BODY ARMOUR AWARENESS

Helston Forensics
FORENSIC BALLISTIC LABORATORIES

Introduction

This one-day course is designed to give the student an overview of manufacturing processes, design trends and the ability of new materials to withstand the latest threats. The covered topics will be of particular interest to tactical firearms officers, trainers, tactical advisors, procurement and all who are concerned with personnel safety.

The Course is conducted by personnel from Associated Armour Ltd who operate from Helston Forensics Laboratory. Associated Armour are currently working with the latest materials and advising major manufacturers on processes required to deliver the lightest and most efficient armour systems.

Agenda

- Health and Safety
- Defining ballistic and stab/spike resistance
- Standards (what they are and how they work)
- Explain how standards reflect risk assessments
- Handgun and rifle armour characteristics
- Kinetic energy and ammunition differences
- Fragment threats
- Introduction to materials and how they work
- Difference between aramids, polyethylene and fibres
- Ceramic types, benefits and how they work
- Armour lab testing, equipment used, loading, measuring and materials
- Armour design
- Protection types
- Operational (tactical) use
- Armour instruction
- Mid-life testing techniques
- Blast threats overview

Notes

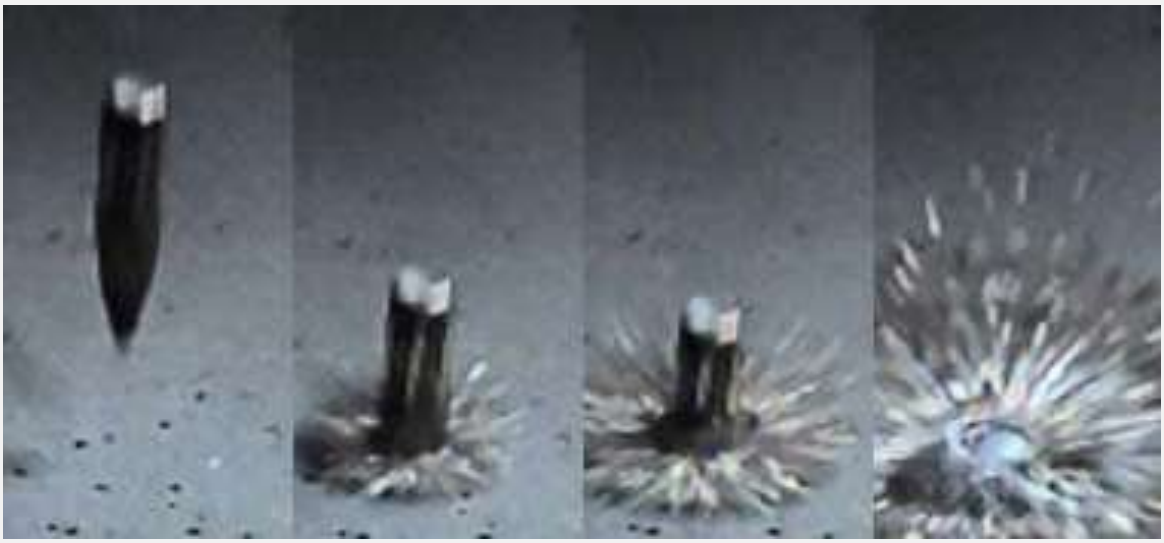
1. The course duration will be 09:00-16:30.
2. Refreshments and lunch will be provided.
3. Assistance with hotel bookings will be available from our office staff.

UMNPE materials (AA processed) offer a lightweight solution for stopping the AK47 steel core bullet

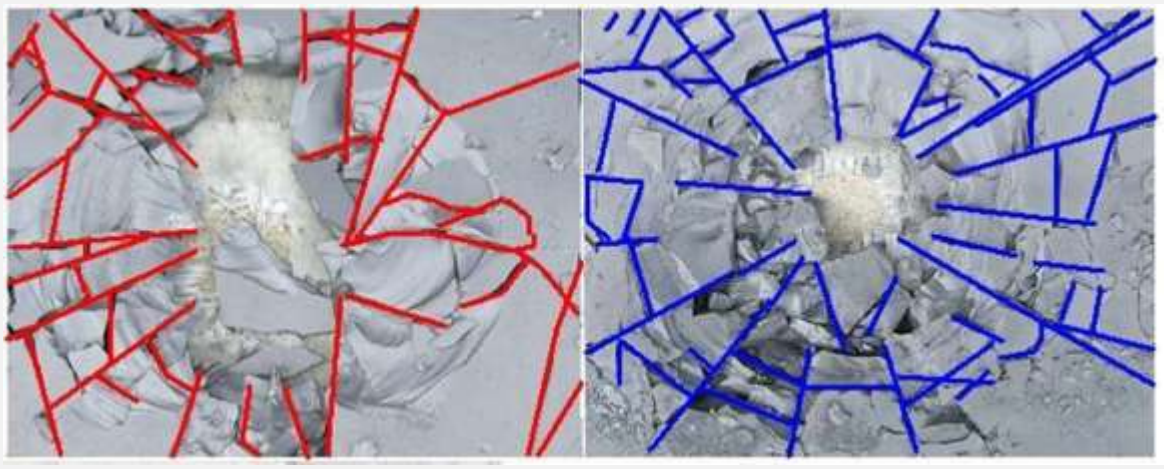
AK47 steel core bullets before and after hitting the new material AA processed as shown

Soft armour, AA manufactured super lightweight body armour that is able to stop the 9 mm/ .357/ 44 magnum bullets

30 mm thick steel and alloy material unable to stop the M2AP bullet



Understanding what happens when the bullet impacts a target is essential when calculating how to defeat the threat



Understanding how various ceramic compounds fracture when impacted by an armour piercing bullet is essential when designing a new armour. Critical fracture lines on a multi hit piece of armour gives the armour designer valuable information during the design/ test phase

Helmet Shells front (left) and rear (right) showing Fragment Simulated Projectiles (FSP) impacts during V50 (ballistic limit) testing

UHMWPE Plate stops AK47MSC and M80 Ball at 12mm

New Development Plate and Carrier Testing (Crib Gogh Spartan QR)

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