

# Ballistic Testing – Theory and Practice

## Summary

**Armour Solutions**, hosted by **Ballistic and Mechanical Testing**, is conducting a **one-day course** to educate attendees in the principles and practices of **ballistic testing of armour**.

## Date

Two one-day courses will be conducted on the **11<sup>th</sup> and 18<sup>th</sup> September, 2018**. The courses will run from 08.30 to 16.30 on each day and include catering and refreshments.

## Expressions of Interest

Expressions of Interest (EOI) can be sent to Ian Crouch by the **3<sup>rd</sup> August, 2018** at [ianarmoursolutions@gmail.com](mailto:ianarmoursolutions@gmail.com). EOI must outline potential **conflicts of interest**. As the course is being delivered in a secure environment, Armour Solutions reserves the right to refuse entry into the course.

## Location

Ballistic and Mechanical Testing, 100 Turner Street, **Port Melbourne**, 3207, Victoria Australia

## Cost

**\$625 per person**, excluding GST. Payment must be made in advance, by direct credit, against an invoice that will be raised for each registered organisation/individual once attendance is confirmed.

## Course Objectives

The one-day course is being offered for two separate groups of up to **12 attendees per group**.

The course will be delivered in person by **Dr Ian Crouch**, Adjunct Professor at RMIT University, and Editor and Lead Author of the recent publication entitled “The Science of Armour Materials” published by Elsevier in October 2016. Demonstrations will be led by **Ben Eu**, General Manager of BMT, and Q&A sessions will allow attendees to ask insightful questions of both these international experts. On the day, the suite of firing ranges, on site at BMT, will also be staffed with interactive, technical personnel.

The aims of the course are:

- To educate attendees in the principles and practices of ballistic testing of armour.
- To provide attendees with the opportunity of seeing ballistic testing first hand, witnessing different types of tests, and thereby gain a better understanding of the science of armour materials and armour systems.
- To provide the attendees with the opportunity of discussing any aspect of ballistic testing with leading experts in the field.

The major deliverables will be:

- Face to face teaching for a small group of up to 12 participants (per course) at an active, Melbourne-based, ballistic testing centre, Ballistic and Mechanical Testing.
- Individual bound copies of presentation material, and information sheets.
- First-hand sight of Ballistic and Mechanical Testing’s full suite of ballistic testing ranges and support facilities, including high-resolution, x-radiography.

## Course Content

The course will include:

- All types of ballistic testing, respective test protocols and current standards.
- The theory of various test methods: RDOP, V-Proof and V-50 testing, etc.
- Detailed coverage of the V-50 test itself, including methodologies, interpretation and analysis of the results, as well as utilisation of results when designing armour systems and/or monitoring quality of production items.
- Various threats will be also discussed and/or demonstrated, including small arms ammunition up to 14.5mm calibre, as well as high velocity fragment simulating projectiles (FSPs).
- It is anticipated that three types of ballistic test will be demonstrated: conventional steel plates (against AP rounds and/or 20mm FSPs), a soft armour system (against 0.22" FSPs) and a body armour system, complete with Hard Armour Plate, (against HV rounds).
- Secondary facilities may also be viewed/used, including high-resolution x-radiography, various conditioning chambers and drop-weight equipment.

## Conditions

- Soft copies of the course content will not be made available
- Armour Solutions Pty Ltd will retain copyright of all presentation material

## Supporting Organisations:

- Armour Solutions Pty Ltd, Trentham, Victoria 3458
- Ballistic and Mechanical Testing, Port Melbourne, Victoria 3207
- Defence Materials Technology Centre, Hawthorn, Victoria 3122