

INDEPENDENCE  
PROTECTION  
COMPLIANCE



AUSTRALIA'S ONLY TRULY INDEPENDENT BALLISTIC RESISTANCE TESTING LABORATORY



# BMT

**BALLISTIC & MECHANICAL TESTING**



## About BMT

**ESTABLISHED IN 1997, WE ARE A PRIVATELY OWNED AND OPERATED AUSTRALIAN BUSINESS SET UP TO INDEPENDENTLY VERIFY COMPLIANCE TO INTERNATIONAL STANDARDS.**

We are a NATA accredited testing laboratory specialising in performing tests and evaluations for the defence, law enforcement, security, transport and aerospace industries.

Our efficiency in delivering test results, the scope of testing capability combined with specialised equipment uniquely support our clients' needs to achieve the highest levels of compliance.

Renowned for our world-class laboratory and our expertise, we provide ballistic testing services for a range of clients in Australia and abroad including NZ, UK, Malaysia, Singapore, Israel, Thailand and China.

BMT is proud to be the contracted sole source supplier of destructive and non-destructive ballistic testing services to the Australian Defence Force and the benchmark in ballistic testing to the Australian armour manufacturing industry.



# Ballistic testing

**SPECIALISING IN BALLISTIC TESTING, OUR COMPREHENSIVE RANGE OF COMPLIANCE AND PERFORMANCE EVALUATION SERVICES INCLUDES -**

- Body armour - helmets, eyewear, vests, stab and spike protection, textiles
- Impact resistance testing of glass
- Bullet resistance testing in relation to physical and personal security
- Armoured vehicles -armoured personnel carriers, dignitary vehicles and cash carrying vans
- Physical protection - intruder resistance, bullet / impact resistant glass
- Transport - trains and buses for impact resistance
- We can perform AS/NZS, MIL, NIJ, HOSDB, NATO standards compliance testing.



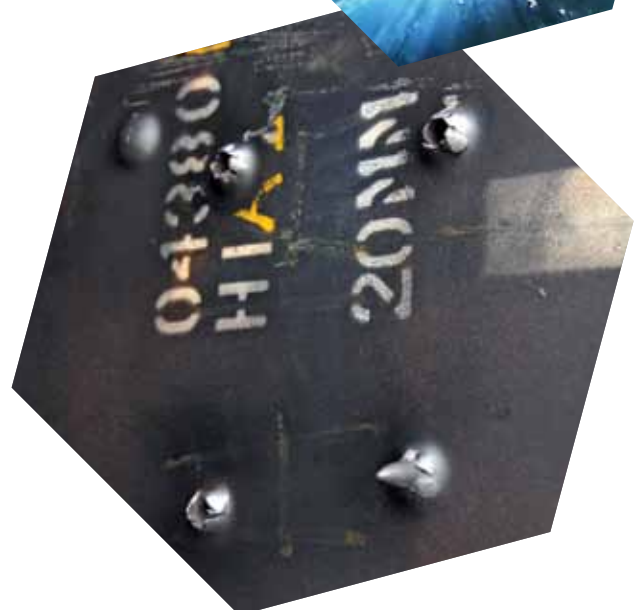
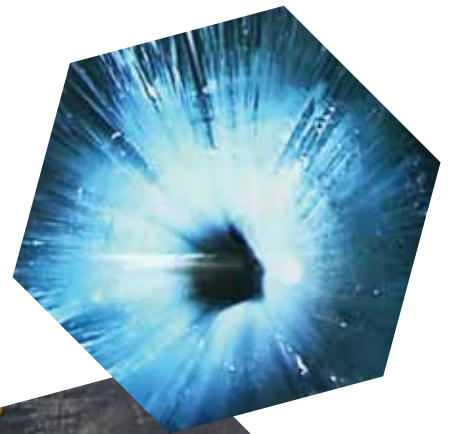
## Our laboratory

**OUR TESTING LABORATORY PROVIDES TESTING SERVICES OF ARMOUR AND IMPACT RESISTANT PRODUCTS USED IN MILITARY AND CIVILIAN SITUATIONS FOR COMPLIANCE TO INTERNATIONAL TEST STANDARDS.**

We are an Australian Defence Recognised Supplier and the industry recognised leader in testing of armour. We are contracted as the sole source supplier of independent ballistic testing to the Australian Defence Force, Defence Materiel Organisation.

We are experienced and competent in establishing test programs which enable you to meet compliance in any market or tender along with assisting in conducting R&D, Certification, Batch and Life Extension testing.

BMT has the capability to pre-condition your test samples prior to ballistic or radiographic testing.



# Non-destructive testing

## High Resolution Digital Radiography (X-Ray)

### ADVANCED RADIOGRAPHIC ANALYSIS OF BODY ARMOUR STRIKE PLATES AND OTHER CERAMIC AMOUR TYPES ARE EVALUATED THROUGH THE USE OF HIGH RESOLUTION DIGITAL X-RAY

This service provides accurate data ideally suited to research & development and quality assurance protocols. We offer our clients secure Internet access to our Archive Server for X-ray images. This enables you to view and edit your x-ray images using zoom, contract and measure tools.

We are able to detect defects as small as 85 micron. Detecting manufacturing defects in raw tiles prior to laminating into complete hard armour systems:

- ✦ Detecting cracks etc. which can result from the manufacturing process of hard armour systems
- ✦ Non Destructive “through life” and “life extension” examination of hard armour strike plates (body armour)
- ✦ Analysis of drop or durability test on ceramic hard armour plates
- ✦ Defect/damage analysis prior to acceptance of ceramic materials

### OUR COMPLETE OFFER OF NON-DESTRUCTIVE TESTING IS SUMMARISED AS FOLLOWS:

#### NON DESTRUCTIVE TESTING

- ✦ Digital radiography
- ✦ Scanning resolution down to 85 micron

#### WEB ACCESS ARCHIVE SERVER

- ✦ Remote access to x-ray images via internet
- ✦ Images open with analysis software – DICOM viewer
- ✦ Very fast upload speed (10MB image in approx 2 seconds)
- ✦ System allows for “conference” viewing of images
- ✦ Quality and Assurance capability for ceramic manufacturers

#### HIGH SPEED DIGITAL PHOTOGRAPHY

- ✦ Up to 100,000 frames per second
- ✦ Indicator of projectile yaw
- ✦ Determination of projectile stability
- ✦ Provides real time impact analysis of ceramic/composite/glass
- ✦ Ammunition analysis
- ✦ Residual/exit velocity determination

## Ammunition evaluation testing

### AT BALLISTIC & MECHANICAL TESTING, WE OFFER A COMPREHENSIVE RANGE OF AMMUNITION PERFORMANCE EVALUATION TESTING SERVICES TO THE MOST ACCURATE PARAMETERS.

We have access to authentic armour piercing ammunition as specified by individual test standards. Our team is experienced and competent in conducting testing as follows:

- ✦ Pressure tests
- ✦ Recoil measurement
- ✦ Propellant Burn rates
- ✦ Chamber and peak pressure consistency
- ✦ Lock time measurement
- ✦ Velocity accuracy
- ✦ Velocity measurement
- ✦ Penetration analysis
- ✦ Accuracy evaluation





- *Extreme cold climate conditioning to -45°C.*



- *Extreme hot climate conditioning to 150°C.*



- *We carry a very comprehensive range of threat ammunition. We go to great lengths to ensure that we source our ammunition from the same batch lots so that we can provide our customer with absolute continuity and traceability of their test data. Refer to our website for a list of original factory threat ammunition in stock and available for use.*

## The BMT Advantage

- ⚙ NATA Accredited (No. 13310) to ISO/IEC 17025:2005
- ⚙ Defence Recognised Supplier
- ⚙ Israeli Defence Force certified
- ⚙ Access to unique testing ammunition
- ⚙ Expedient testing turnaround timeframes
- ⚙ Approved to test to an extensive breadth of international standards
- ⚙ Ultra high resolution digital radiography (X-ray)
- ⚙ Independent, unbiased testing and evaluation

## Testimonials

*"BMT has been a trusted service provider for our independent third party testing and certification for many years. Their capabilities and professionalism ensure the consistently highest level of service is delivered. We would recommend BMT to any end user or private contractor who requires their services."*

Hugh Oldfield  
CEO  
Armor Australia Pty Ltd

*"BMT is an integral part of our armour manufacturing process. From Re-D to certification, from body armour to vehicles armour to STANAG Level 4. BMT's independence, efficiency and strong reputation underpin CIB's success in the supply of armour to the Australian Defence Force and various police forces around the world."*

Rob Craig  
Craig International Ballistics

*"Aquaterro have used the ballistic testing services of BMT for the past 5 years to support our major projects for Armour Supply to State and Federal Government, as well as industry clients. As the largest importer of body armour systems in Australia, it has been our pleasure to escort our overseas manufacturers to BMT, and see their positive reaction to the very professional services and facilities maintained by BMT."*

Graeme Bulte  
Managing Director/CEO  
Aquaterro APS

*"Like many people in the armour industry, ADA has watched, and supported, the growth of BMT over the past ten years. Their professional, can-do attitude is second to none and the range of facilities now offered by BMT are world-class"*

Dr Ian Crouch  
Business Manager, Armour Technologies,  
ADA, August 2013



**Ballistic and Mechanical Testing Pty Ltd**

100 Turner Street,  
Port Melbourne 3207  
Victoria Australia

**T** +61 (0) 3 9646 4211

**F** +61 (0) 3 9646 9883

**M** +61 407 984 778

**E** [enquiries@armourtesting.com](mailto:enquiries@armourtesting.com)

**Ben Eu**

General Manager

**E** [ben@armourtesting.com](mailto:ben@armourtesting.com)



**AUSTRALIA'S ONLY TRULY INDEPENDENT BALLISTIC RESISTANCE TESTING LABORATORY**