Development of an EOD Suit
Advances in Protective Clothing

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April 2012
Coventry
Previous Experience

Advanced Composite Products

Replacing metals with advanced composites
Previous Experience

MEDICAL STRUCTURES

Replacing metals with advanced composites
Composite Aircraft Seat Frame

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Carbon Bike Frame

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Previous Experience

BODY ARMOUR

Replacing metals with advanced composites
Previous Experience

Military and Police Helmets

Replacing metals with advanced composites
Previous Experience

Armoured Vehicles

Replacing metals with advanced composites
Previous Experience

Protective Structures

Replacing metals with advanced composites
Previous Experience

Technical Moulding

Replacing metals with advanced composites
Laboratory

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NP Aerospace Test Capability

3 Instron Universal Test Machines

- Can test to 200KN
- Tensile
- Compressive
- Cyclic

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1000 Tonne Press for Moulding Panels

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Advances in Protective Clothing

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The suit must provide protection for

• Shock Wave
• Blast Wave
• High Speed Fragments
An Early Mock Up

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An Early Mock Up
An Early Mock Up

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Meeting the Customer - Team Bonding

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Demonstrations of Existing Equipment

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Quantitatively assessing existing equipment
Building up material layers without binding the wearer

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Testing the Principle of the Fire Test
The Full Test
Suit subjected to over 200 kilo watts

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Iom3
The Institute of Materials, Minerals and Mining
Blast Testing fabrics and constructions
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Blast Testing
EOD BLAST INTEGRITY SUIT

**Outer Layer**
Meta aramid

**Centre Layer**
Cloth aramid

**Inner Layer**
Cloth polyester

**Wear pads**
Cloth, coated polyurethane on textile nylon

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Prototype rapid tooling system
Moulding Helmet Shells
Metal production standard tooling

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EOD HELMET

Shell
- Cloth, Aramid + Phenolic Resin

Visor
- Glass / Polycarbonate

Liner
- Polystyrene

Lining
- Brushed Nylon / Polyurethane Foam

Fabric
- Polyester Warp Knitted

Support Pads
- Polyethylene Foam
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The plate can be readily removed and replaced during operations. Unique fixings ensure that the inertia effect during a blast incident does not inadvertently open fixings.
Physiological evaluation

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Physiological Evaluation

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Physiological Evaluation

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Cooling pack
Cooling Pack Testing

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