26, Man Singh Road, Jaisalmer House,
New Delhi, the 28th August, 2014.

To,

DsG : AR (through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D.

Subject : Trial Directives for Half Body Suit.

The Trial Directives in respect of Half Body Suit as per the Annexure have been accepted by the Competent Authority in MHA.

2. Henceforth, all the CAPFs should trial evaluate the above items strictly as per the laid down Trial Directives and Technical Specifications/QRs issued vide letter of even number dated 09-06-2010.

Yours faithfully,

(M. K. Chahar)
Under Secretary (Prov-I)

Encl.: As above.

Copy to: SO(IT), MHA : with the request to host the Trial Directives (soft copy being sent through email) on the MHA website (under the page of Organizational Set up-Police Modernization Division) alongwith QRs for Half Body Suit.

(R K Soni)
Section Officer (Prov-I)

Copy to: Dir(Procurement), MHA.
# Trial Directives for Half Body Suit

## Qualitative Requirements / Technical Specifications of Half Body Suit as per MHA Letter NoIV/210115/2010-Prov-1 dated 09 Jun 2010

<table>
<thead>
<tr>
<th>Sr</th>
<th>Construction</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General</td>
<td>The BOO to physically check</td>
<td></td>
</tr>
</tbody>
</table>

**General** - The half body suit for Bomb Disposal should provide 360° all round upper body torso protection. It will consist of the following:

- **(a) Jacket with groin protection and insert able hardened armour plate**
- **(b) Detachable neck and shoulder protection**
- **(c) Fragmentation helmet with ballistic visor.**

## 2. Jacket with groin protection, detachable, neck and shoulder protection

- **(a) Outer Fabric.** The outer carrier fabric of the jacket groin protection detachable neck and shoulder protection be made of heavy duty, long lasting and high abrasion resistant CORDURA or equivalent fabric that is water resistant. It should be machine washable.

- **(b) Inner Lining Fabric.** The inner lining fabric should provide enhanced wearer comfort through use of 3-D fabric for sweat absorption and breath ability and ventilation. It should be machine washable.

- **(c) Flexibility.** The jacket and groin protection should be flexible and allow complete freedom of movement without compromising on efficiency, it should snug fit and ensure proper height adjustment for the wearer and there should be no ride up while sitting.

- **(d) Upgradeability** Only the jacket should have provision for adding on hard armour plate on the front torso for added ballistic protection when required.

- **(e) Belt** Made of nylon/Polyester with minimum width of 10cm should be provided around the waist to properly secure the jacket around the wearers waist. Should be of same material as the outer fabric with Velcro.

---

Certificates from an accredited National / international Lab would be the acceptance criteria.
# TRIAL DIRECTIVES FOR HALF BODY SUIT

<table>
<thead>
<tr>
<th>Srl No</th>
<th>Qualitative requirements /Technical Specifications of Half Body Suit as per MHA Letter No IV/21011/5/2010-Prov-1 dated 09 Jun 2010</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(f)</td>
<td><strong>Trauma Pad.</strong> Must be provided on the inside to provide proper cushioning during impact.</td>
<td>The BOO to physically check</td>
<td></td>
</tr>
<tr>
<td>(g)</td>
<td><strong>Carrying case/bag.</strong> Should have a durable water proof carrying case/bag.</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td>(h)</td>
<td><strong>Weight.</strong> Not more than 12 Kg (including HAP).</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td><strong>Trauma level.</strong> Back face signature should not exceed 25mm.</td>
<td>Certificate from an accredited National /international Lab would be the acceptance criteria</td>
<td>The BOO to check the undertaking</td>
</tr>
</tbody>
</table>

## 3. Fragmentation Helmet and Ballistic Visor.

| (a)    | Should be lightweight and provide protection against fragmentation from IED and other explosives. | -do-   | -do-   |
| (b)    | Should be of made of high tenacity aramid fabric or equivalent material.                        | -do-   | -do-   |
| (c)    | **Suspension system -** Should have 4 point chin strap harness with an integrated nape pad. Should have 7 EVA foam pads with webbing split chin strap. The visor should have provision for locking at three position without using additional bolting in the helmet. | -do-   | -do-   |
| (d)    | Should have a helmet case/bag.                                                                  | The BOO to physically check |        |
| (e)    | **Weight -** Not more than 3 Kgs with visor.                                                    | -do-   |        |

## Protection, Fragmentation resistance

<p>| 4.     | Jacket - with groin protection, detachable neck and shoulder protection                          | Certificate from an accredited National /international Lab would be the acceptance criteria | The BOO to check the undertaking |
|        | <strong>(a) V6 - V50 of 600 m/s (MIL STD 662-F and NATO STANAG 2920)</strong>                               |        |        |</p>
<table>
<thead>
<tr>
<th>Sr No</th>
<th>Qualitative requirements /Technical Specifications of Half Body Suit as per MHA Letter No/IV/21011/5/2010-Prov-1 dated 09 Jun 2010</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td><strong>Fragmentation Helmet.</strong> (a) V6 : V50 of 600 m/s (MIL STD 662-F and NATO STANAG 2920)</td>
<td>Certificate from an accredited National / international Lab would be the acceptance criteria</td>
<td>The BOO to check the under taking</td>
</tr>
<tr>
<td>6</td>
<td><strong>Ballistic Visor</strong> (a) V4 : V50 of 450 m/sec (MIL STD 662-F and NATO STANAG 2920)</td>
<td>Certificate from an accredited National / international Lab would be the acceptance criteria</td>
<td>The BOO to check the under taking</td>
</tr>
<tr>
<td>7</td>
<td><strong>Hard Armour Plate.</strong> (a) Made of high performance polyethylene fibre.</td>
<td>-do-</td>
<td>-do-</td>
</tr>
<tr>
<td></td>
<td>(b) Area of HAP should be minimum 1250 Square Cms.</td>
<td>-do-</td>
<td>-do-</td>
</tr>
<tr>
<td></td>
<td>(c) Curvature should be suitable to fit the body contour and cover the side and rib cage.</td>
<td>The BOO to physically check</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) Should be water proof.</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) Protection level of NIJ level III (NIJ Std 0101.04)</td>
<td>-do-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(f) To be tested in conjunction with jacket.</td>
<td>-do-</td>
<td></td>
</tr>
</tbody>
</table>

**Signatures:**

- DC, CRPF
- BPR M
- SBS
- ASR
- AK
- DG (Pow), NSG
- DG, NSG

**(J N Choudhury)**

**APPROVED / NOT APPROVED**
No. IV-21011/5/2010-Prv-I
Government of India
Ministry of Home Affairs
26, Man Singh Road, Jantar Mantar House,
New Delhi, 9-6-2010

To

The DGs-Assam Rifles/BSF/CISF/CRPF/TBP/NSG/SSB/BPR&D

Subject: - QRs/Technical Specifications for the security related equipments -regarding

Sir,

The QRs/Technical Specifications for the following security related equipments have been accepted and approved by the Competent Authority in MHA and the same are enclosed for information and Record:-

(i) Half Body Suit
(ii) M40 7.62mm Muli Barrel

2. Henceforth, all the CPMEs should procure the above items required by them strictly as per the laid down Technical Specifications/QRs.

Yours faithfully,

(Singh Bhun)
Deputy Secretary to the Govt. of India

Enclose: 4 sheets
Copy to:-

DD(Procurement), MHA

Copy for information to:-

PS to IS(PM), MHA


CONSTRUCTIONS

1. **General**: The half body suit for Bomb Disposal should provide 360° all round upper body torso protection. It will consist of the following:

   (a) Jacket with groin protection and insert able hardened armour plate.
   (b) Detachable neck and shoulder protection.
   (c) Fragmentation helmet with ballistic visor.

2. **Jacket with groin protection, detachable neck and shoulder protection**:

   (a) **Outer Fabric**: The outer carrier fabric of the jacket groin protection detachable neck and shoulder protection be made of heavy duty, long lasting and high abrasion resistant CORDURA or equivalent fabric that is water resistant. It should be machine washable.

   (b) **Inner Lining Fabric**: The inner lining fabric should provide enhanced wearer comfort through use of 3 D fabric for sweat absorption and breath ability and ventilation. It should be machine washable.

   (c) **Flexibility**: The jacket and groin protection should be flexible and allow complete freedom of movement without compromising efficiency. It should snug fit and ensure proper height adjustment for the wearer and there should be no ride up while sitting.

   (d) **Upgradeability**: Only the jacket should have provision for adding on hard armour plate on the front torso for added ballistic protection when required.

   (e) **Halt**: Made of nylon/Polyester with minimum width of 10cm should be provided around the waist to properly secure the jacket around the wearer's waist. Should be of same material as the outer fabric with Velcro.

   (f) **Trauma Pad**: Must be provided on the inside to provide proper cushioning during impact.

   (g) **Carrying case/bag**: Should have a durable water proof carrying case/bag.

   (h) **Weight**: Not more than 12 Kgs(including HAP).

   (i) **Trauma level**: Back face signature should not exceed 25mm.

3. **Fragmentation Helmet and Ballistic Visor**:

   (a) Should be lightweight and provide protection against fragmentation from IED and other explosives.

   (b) Should be of made of high tensile aramid fabric or equivalent material.
(c) Suspension system – Should have 4 point chin strap harness with an integrated nape pad. Should have 7 EVA foam pads with webbing split chin strap. The visor should have provision for locking at three position without using additional bolting in the helmet.

(d) Should have a helmet case bag.

(e) Weight – Not more than 3 Kgs with visor.

**Protection.**

**Fragmentation Resistance.**

4. Jacket – with groin protection, detachable neck and shoulder protection
   (a) V5 : V50 of 600 m/s (MIL STD 662-F and NATO STANAG 2920)

5. **Fragmentation Helmet**
   (a) V6 : V50 of 600 m/s (MIL STD 662-F and NATO STANAG 2920)

6. **Ballistic Visor.**
   (a) V4 : V50 of 450 m/sec (MIL STD 662-F and NATO STANAG 2920)

7. **Hard Armour Plates.**
   (a) Made of high performance polyethylene fiber.
   (b) Area of HAP should be minimum 1250 Square Cms.
   (c) Curvature should be suitable to fit the body contour and cover the side and rib cage.
   (d) Should be water proof.
   (e) Protection level of NIJ level III (NIJ Std 0101.04)
   (f) To be tested in conjunction with jacket.

Approved/Not approved

(MPS Aulakh) 04/07/10
Director General, NSG