To

The DGs: Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/SSB/BPR&D

Subject: Up-gradation of specifications for the CTS items regarding

The specifications, up-graded/framed by the DGs&D, for the following CTS items, have been accepted by the Competent Authority in MHA:

2. Viscose Full Sleeve - Annex ‘B’
3. Ankle Boot Rubber Sole (Jungle Boot) - Annex ‘C’
4. Boot High Ankle DVS (Improved version) - Annex ‘D’

2. Henceforth, all the CPMFs should procure the above items required by them strictly as per the laid down up-graded specifications of the said CTS items.

(R.S. Sharma)
Director (Proc)

Copy to:

DD (Procurement), MHA

Copy for information to:

PS to JS (PM), MHA
GOVERNMENT OF INDIA  
DIRECTORATE GENERAL OF SUPPLIES & DISPOSALS  
JEBAN TARA BUILDING, SANSAD MARG  
NEW DELHI-110001  

DRAFT SPECIFICATION  
FOR  
JERSEY WOOLLEN 'V' NECK DYED

1. FOREWORD:  
This specification is prepared taking assistance of specification no: G/TEX/W-69/1992,  
AIR HQ/QDSAS/AC-047 & GS: 2360-1977 and the experience gained by the department  
during the past years.

2. SCOPE:  
This specification caters to the need of paramilitary forces and various police  
organizations. This standard prescribes the constructional details & other particulars of  
jersey woolen 'V' neck dyed.

3. MATERIAL:  
3.1 Jersey shall be manufactured from the following materials:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Components</th>
<th>Materials</th>
<th>Particulars</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Body &amp; Sleeves</td>
<td>Basic knitted fabric dyed</td>
<td>Worsted yarn 55 T ex 2</td>
</tr>
<tr>
<td>b</td>
<td>Reinforcement of sleeves, shoulder, shoulder straps &amp; pen pockets</td>
<td>Cloth polyester viscose</td>
<td>As per IS: 11248-1995 andt. No-2 September 1999</td>
</tr>
<tr>
<td>c</td>
<td>Stitching</td>
<td>Thread sewing spool polyester 145 T tex x 4 variety no-#</td>
<td>IS:9543-1980.</td>
</tr>
<tr>
<td>d</td>
<td>Linking</td>
<td>Worsted yarn 55tex x 2</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>Over-locking</td>
<td>Worsted yarn 55tex x 2</td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>Buttons</td>
<td>Button plastic 13 mm</td>
<td>IS:1401-1984</td>
</tr>
</tbody>
</table>

4. MANUFACTURE:  
4.1 The body and sleeves shall be knitted independently from worsted yarn of 55 tex x 2  
     and 2 x 2 rib knit. The cuff and bottom rib shall be knitted integrally and tightly to
achieve the desired rib-effect. The fabric shall be uniform in shade, texture, and appearance and free from knitting flaws. The cuffs and bottom rib shall contain at least two strengthening rounds.

4.2 The jersey shall be fabricated to the required size and dimensions as given in appendix 'B'. The shape and design of the jersey shall be as shown in the drawing attached (Fig. 1 & 2) to the specification. The total rib cuff shall be 15 cm in length and shall be joined on upper side by flat-lock linking machine and shall be free from protrusions and looseness.

4.3 The neck opening shall be V shape open-lapping at the bottom keeping the left side well on upper side at about 45 degree angle. The neck well shall be of 2 x 2 rib knit of body material and shall be 3 cm wide in double fold. The well shall be secured to the body by linking.

4.4 The jersey shall be provided with two shoulder straps. The seam of shoulder (inside top portion) shall be made with overlock stitching and finally with seam covering machine throughout the shoulder seam. In case the neck well is secured with linking, the overlock stitching of the shoulder shall be completely covered with reinforcement material for strengthening. The shoulder seam and arm pit shall be strengthened with polyester viscose cloth of required shade. Button plastic provided on shoulder at 2 cm away from the neck well and a button hole shall also be provided on each shoulder strap 6 cm away from the edge of open end.

4.5 Two pen pockets on the upper arm of left sleeve shall be provided with polyester viscose cloth of required shade. The base of these pockets shall be 15.5 cm in length and 6 cm in width. These pockets shall be 12.5 cm in length and 3 cm in width. The base fabric shall be 8 cm down from shoulder straps joint.

4.6 The shoulder and sleeve at elbow shall be reinforced with polyester viscose cloth as shown in the drawing. The shoulder reinforcement shall be extended on front and back equally to a depth of 11 cm and shall be in one piece without seam. Joint on shoulder top. One side of each shoulder reinforcement piece shall be stitched along with joint of body and sleeves.

4.7 Stitching of shoulder reinforcement, sleeve reinforcement, shoulder straps and pen pockets shall be done with lock stitching with thread sewing spun polyester of required shade regulated at 4.5 stitch per cm.

4.8 Overlock stitching at linking and seam covering shall be done with one wrapped thread as used for knitting in conjunction two threads of thread sewing spun polyester. The stitching tension shall be even throughout with all loose ends fastened and trimmed off. The number of stitches per centimeter shall not be less than 4 at any place.

4.9 The seams and joints shall withstand stretching in all directions to the full extent of the knitted fabric without breaking or allowing the loop of knitted fabric to run.
5 REQUIREMENTS
5.1 Jersey shall conform to dimensions and mass as per appendix 'B'. Other requirements shall be as follows:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Characteristics</th>
<th>Requirements</th>
<th>Tolerance</th>
<th>Method of Test</th>
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<tbody>
<tr>
<td>a</td>
<td>Composition</td>
<td>All Wool</td>
<td></td>
<td>IS:2006-1998(on dry basis)</td>
</tr>
<tr>
<td>b</td>
<td>Wool Quality (when determined from finished sample) 64.5 as per IS:5911-1977(except clause 1.2)</td>
<td>-</td>
<td>IS:744-1977</td>
<td></td>
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<tr>
<td>c</td>
<td>NO of Wale/DM on either surface i) Body: 30(15 x 2 visible rib) ii) Cuffs &amp; Bottom Rib: 40(20 x 2 visible rib)</td>
<td>-</td>
<td>As per clause A-4 of IS:2360-1977</td>
<td></td>
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<tr>
<td>d</td>
<td>NO of courses/ED on either surface (i) Body: 60 (ii) Cuff &amp; Bottom Rib: 60</td>
<td>2 2</td>
<td>As per clause A-4 of IS:2360-1977</td>
<td></td>
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<tr>
<td>e</td>
<td>Scouring Loss %</td>
<td>4.0</td>
<td>Max</td>
<td>As per clause A-6 of IS:2360-1977</td>
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<tr>
<td>f</td>
<td>Dimensional Change(Due to relaxation)</td>
<td>5.0</td>
<td>Max</td>
<td>A-5 of IS:2360-1977</td>
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<tr>
<td>g</td>
<td>PH Value</td>
<td>5 to 7.5</td>
<td></td>
<td>IS:1390-1983(cold method)</td>
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<tr>
<td>h</td>
<td>Colour Fastness to Light</td>
<td>5 or better</td>
<td></td>
<td>IS:2454-1985</td>
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<tr>
<td></td>
<td>Washing</td>
<td>4 or better</td>
<td></td>
<td>IS:3361-1979(text-2)</td>
</tr>
<tr>
<td>i</td>
<td>Breaking load of yarn wound 55 gms over 50 cm, taken out of fabric(10 cm grip) in Gms.</td>
<td>550.0</td>
<td>Min</td>
<td>IS:1670-1991</td>
</tr>
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</table>
52 Sealed Sample—If in order to illustrate or specify the characteristics such as weight, appearance, colour, etc., the buyer and seller have agreed upon and sealed, the sample shall be in accordance with the sample so agreed.

53 Custody of the sealed sample shall be a matter of agreement between the buyer and the seller.

6. MARKING

6.1 A suitable cloth label, white in ground, shall be securely attached to each jersey on the inside of the neck opening (on the side from which the following details shall be woven with a felt or felt-like non-fading thread:

- a) Name of the material;
- b) Size;
- c) Fibre composition;
- d) Manufacturer's name, initials of trade mark, city, and year;
- e) Any other information as required by the market.

7. PRESERVATION

7.1 The jerseys shall be preserved with sulphur hexamine at a minimum quantity of 5 kg per cubic metre of volume at the time.

8. PACKING

8.1 Jerseys of the same size and shade shall be packed together in a bundle in accordance with IS: 2518-1964 or IS: 13358-1986 for the purpose of marking.

8.2 Alternatively, the jerseys may be packed by the method agreed to when specifically agreed to between the buyer and the seller.

Ten jerseys of the same size and shade shall be packed together, securely tied with twine or string to form a bundle. These five bundles shall...

*Code for seaworthy packaging of wool, worsted yarn, and worsted.
†Code for inland packing of wool, worsted yarn, and worsted.
be wrapped with an inner layer of polyethylene film of minimum 60 microns (see IS: 2808-1965) or kraft paper (see IS: 6343-1967) and an outer layer of heavy jute cloth (see IS: 1583-1961) or equivalent hessian cloth to form a rectangular bale weighing approximately 35 kg. The number of the inner layers shall be at least 10 to ensure full protection to the contents of the bale. The overlap of the outer layer of jute cloth or hessian shall be such that it can be properly and securely tied down around the bale. The bale shall be stitched with double 3-ply jute twine with not less than 0.5 cm diameter taking care not to pierce the inner layers during stitching. Sufficient heavy jute cloth or hessian shall be stitched at each corner to form 'ears' of about 25 cm in length. The bale shall be made secure by fastening with at least two small steel staples or hoops or metal wires in each direction along the length and the width of the bale.

9. SAMPLING

9.1 The sampling procedure given below shall be carried out by both the buyer and the seller provided that the bales are found to be homogeneous. To achieve this, the manufacturer shall maintain a continuous process control at all stages of manufacture, and shall be required to render by him for inspection comply with the requirements of the standard in all respects.

Note — For effective process control, the use of statistical analysis is recommended and a suitable quality control system may be adopted. The exact method is specified in IS: 1583-1961.

9.1.1 The conformity of the lot to the requirements of the specification shall be determined on the basis of the tests carried out on the samples selected from it.

9.2 Unless otherwise agreed to between the buyer and the seller, a random number of bales, depending upon the size of the lot, shall be selected in random in accordance with col 2 of above.

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*Specification for low density polyethylene films.
†Specification for kraft paper (first edition).
‡Specification for heavy jute cloth.
§Method for statistical quality control during production.
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**Dimensions and Mass**

Appendix R