No.U.II-98 (Spec)/2014-15-Prov (PP/Holster) 607

भारत सरकार/Government of India

गृह मंत्रालय/Ministry of Home Affairs

पुलिस आधुनिकीकरण प्रभाग /Police Modernization Division

संभरण-I डेस्क /Prov.I Desk

Jaisalmer House, 26 Man Singh Road,
New Delhi, the 28th April, 2016

To

The DsG: Assam Rifles, BSF, CISF, CRPF, ITBP, NSG, SSB and BPR&D.

Subject: Qualitative Requirements/Specification of Tactical Pistol Holster.

Sir,

The undersigned is directed to refer to DG, CRPF's U.O. No.U.II-98(Spec)/2015-16-Prov(P/Holster) dated 19.2.2016 on the subject mentioned above and to say that the QRs/Specifications in respect of Pistol Holster as annexed have been approved by the competent authority in MHA.

2. Henceforth, all CAPFs should procure the above item, required by them strictly as per the laid down QRs/Specification.

3. Concerned CAPFs will be accountable for correctness of the QRs/Specifications of Tactical Pistol Holster.

Encl: As above.

Yours faithfully,

28/4/16

(Ritesh Kumar)
Under Secretary to the Govt. of India

Copy forwarded for necessary action to:

SO (IT), MHA - With the request to host the QRs/Specifications of Tactical Pistol Holster on official website of MHA (under the page of Organizational Set up, Police Modernization Division-Clothing Items). Soft copy is being sent through email also.

28/4/16

(V. Devadas)
Section Officer (Prov-I)

Copy to: DDG (Procurement), MHA.

CENTRAL RESERVE POLICE FORCE STANDARD

SPECIFICATION FOR "TACTICAL PISTOL HOLSTER"

Submitted to :

Office of the Directorte General of Police,
CRPF, Ministry of Home Affairs
Block No-1, CGO Complex, Lodhi Road,
New Delhi-03

Prepared by :

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1.0 SCOPE

1.1 The specification prescribes the requirement of **"Tactical Pistol Holster"**.

1.2 The specification is divided in to two parts as per the requirement of the customers.

1.2.1 Part-1: Tactical Pistol Holster with Holster drop leg strap with disruptive pattern print, herein referred as **"Tactical Pistol Holster Complete"**

1.2.2 Part-2: Tactical Pistol Holster without Holster drop leg strap. The fabric used for manufacturing Tactical Pistol Holster may be either black colour or Olive green, herein referred as **"Tactical Pistol Holster Only"**

1.3 This specification does not specify the general appearance, lusture, feel etc. of both parts as mentioned in the Clause 1.2"

2.0 REFERENCES

The standards listed in Annex A contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated in Annex A.

Part-1
Tactical Pistol Holster with Holster drop leg strap with disruptive pattern print (Tactical Pistol Holster Complete)

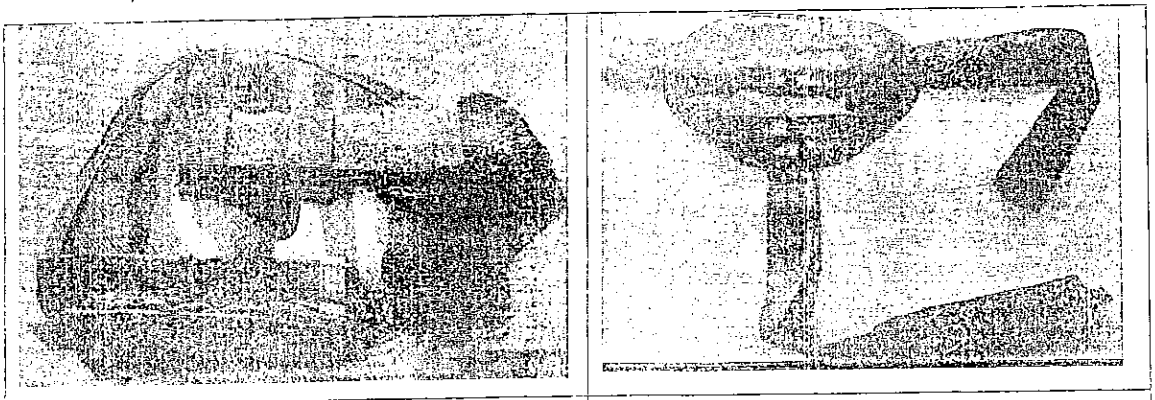
Part-1 : Tactical Pistol Holster with Holster drop leg strap with disruptive pattern print (Tactical Pistol Holster Complete)

3.0 MATERIAL AND MANUFACTURE

3.1 The design and shape of the "Tactical Pistol Holster Complete" shall be as per Fig.4 to 8. The "Tactical Pistol Holster Complete" shall have two parts (See Fig. 1):

i) Holster ***(Weight: 180 to 200g)*** and

ii) Holster drop leg strap ***(Weight: 170 to 190g).***

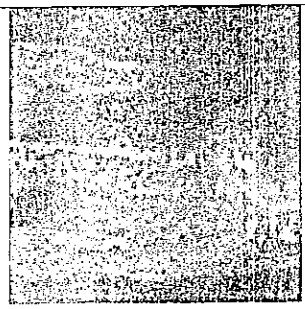


i) Holster	ii) Holster drop leg strap

Fig. 1 Two parts of "Tactical Pistol Holster Complete"

(The print shown in the figure is not an actual. For print pattern, please see the below disruptive print scheme)

Disruptive Print scheme

Disruptive pattern- 03 colours (Brown, olive green and Khaki)	

3.2 Both parts of "Tactical Pistol Holster complete" shall be made using four layers.

3.2.1 Holster : The four layers of Holster part are coded as H1, H2, H3 and H4. The layer-H1 and layer-H4 are made off with disruptive pattern printed (Brown, olive green and Khaki) polyester plain weave fabric [Back side shall be coated with Polyphenylene sulfide (PPS)]. The composition of Layer-H2 and H3 are given in Table-1. The arrangement of all layers is shown in the Fig. 2.

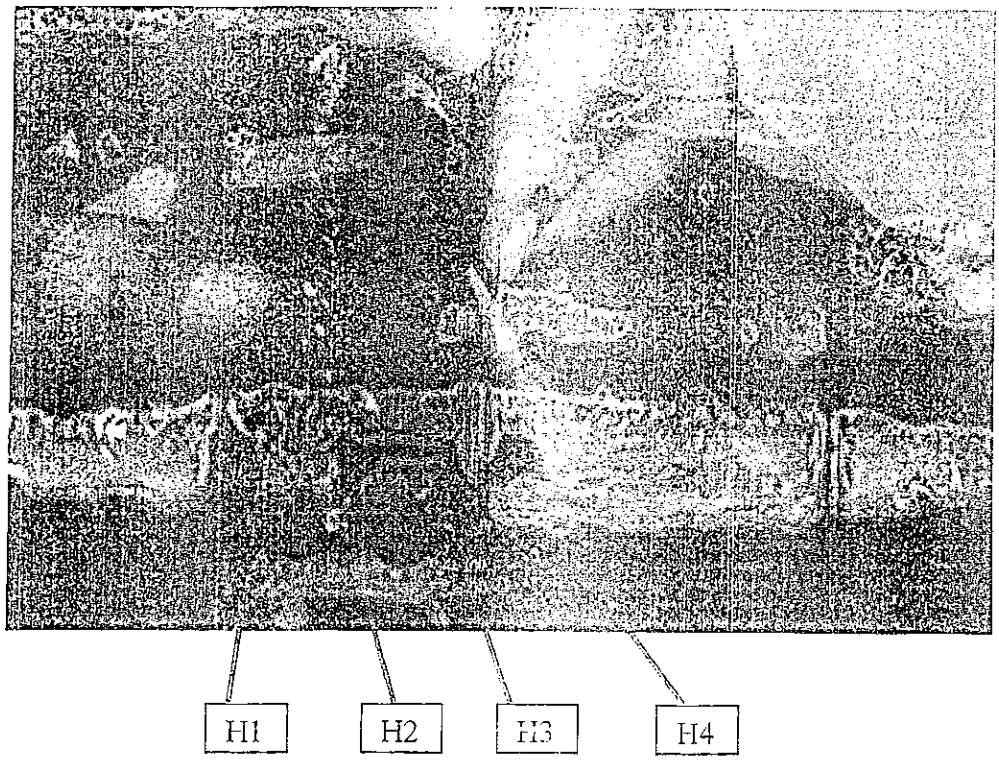


Fig. 2 : Holster- Four Layers (H1, H2, H3 & H4)

Table-1 Properties of Layers of Holster part

Characteristics	Test Method	Requirement			
		Layer-H1	Layer-H2	Layer-H3	Layer-H4
Identification of material	Differential scanning colorimeter (DSC) and FTIR	Polyester coated with PPS	Polyethylene + Polypropylene + Polyester with some filler to make hard	Polyethylene based materials	Polyester coated with PPS
Thickness, mm	ASTM D 374 (By screw gauge method)	0.42-0.45	0.9-1.1	4.2-4.4	0.42-0.45
Hardness,		-	50±3 (Shore D)	20±2 (Shore A)	-
Mass, g/m²	IS 1964 : 1970	Refer Table-5	1200±50	500±25	Refer Table-5

3.2.1 Holster drop leg strap: Four layers of 'Holster drop leg strap' part are coded as L1, L2, L3 and L4. The L1 as a front side and L4 is back side. The layer-L1 shall be made off with same disruptive pattern printed (Olive green, Khaki and Brown) polyester plain weave fabric [Back side shall be coated with Polyphenylene sulfide (PPS)] as used in the Holster part layers H1 and H4. The layer-L4 shall be warp knitted mesh fabric (Polyester multifilament yarn of approximately 350 Denier may be used). For guidance the warp knitted fabric may be manufactured using two guide bars for front fabric, one guide bar for back fabric and one guide bar for interconnecting yarn. Face fabric shall be made using multifilament yarn and spacer yarn shall be mono-filament. For

proper guidance sample held in the custody of customer may be seen. Layer-L2 and Layer-L3 of 'Holster drop leg strap' shall be made out of Polymeric material as given in the Table-2. The arrangement of all layers is shown in Fig. 3.

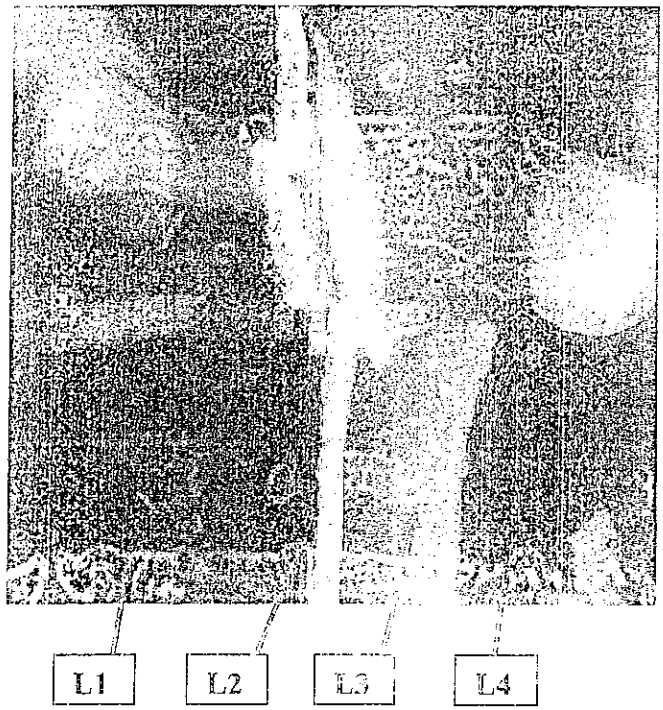


Fig. 3 : Holster drop leg strap - Four Layers (L1, L2, L3 & L4)

Table-2 Properties of Layers of Holster drop leg strap part

Characteristics	Test Method	Requirement			
		Layer-L1	Layer-L2	Layer-L3	Layer-L4
Identification of material	Differential scanning colorimeter (DSC) and FTIR	Polyester coated with PFS	Polyethylene based material	Polyethylene based materials	Polyester warp knitted fabric
Thickness, mm		0.42-0.45	2.1-2.3	3.1-3.4	Refer Table-6
Hardness, Shore A		-	24±3	7±2	
Mass, g/m²	IS 1964 : 1970	Refer Table-5	900±10	800±5	

The disruptive pattern printed woven fabric (1 up 1 down plain weave) shall be manufactured using continuous multifilament (740 ±5% Denier) yarns of Polyester on warp and weft direction. The selvedges of the fabric shall be firm and straight. The fabric shall be 'Heat set' and fully shrunk. The back side of the fabric shall be coated with Polyphenylene sulfide (PPS), which has good heat resistance property. The coating shall be smooth and it should firmly adhere to the fabric. The coated fabric shall be pliable and free from tackiness, stains, pinholes, surface irregularities, wrinkles, patches and all other coating defects. The coating shall not have any objectionable odor.

3.3 The holster shall have a safety hood over the hammer of pistol (when pistol is in the holster) to prevent the release of pistol. The hood shall be made using hook and loop fastener. It should have an adjustable and removable belt loop (Manufacture using Polypropylene webbing). The holster shall be provided with height adjustment facility using holster drop leg strap. Holster shall be designed in such a way that right and left handed shooters can use it easily. Figs 4 to 8 may be referred to get idea of location and dimensions. The holster shall have facility to attach with holster drop leg strap using polypropylene webbing (25 mm wide), loops made off with polypropylene webbing and snap fastener. The 25 mm wide polypropylene webbing may be manufactured using approximately 9700±10% Denier warp yarn with 650±10% Denier linking yarn and 1000±10% Denier weft yarn. The thickness of single layer webbing shall be 1.7±0.2 mm.

Holster shall be provided with a magazine pocket and closing and opening of this pocket shall be carried out using hook and loop fasteners. The loop fastener is stitched on the pocket and loop fastener on the flap of pocket. Below the loop fastener an elastic tape (Good quality) shall also be provided so the magazine remains tightly fixed inside the pocket Fig.

6. The pocket shall be fabricated with same PPS coated Polyester (Disruptive print) fabric as used in H1, H4 and L1. For more clarification sample held in the custody of customer may be seen.

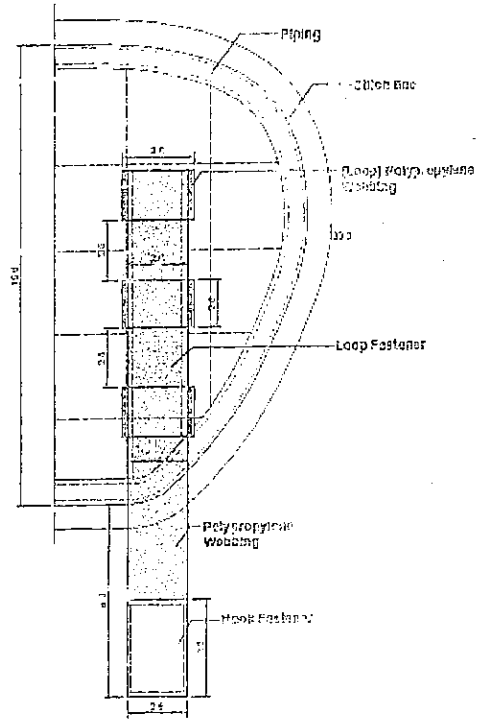
Holster drop leg strap shall be provided with quick release buckles with belt keeper (using 50 mm wide polypropylene webbing, manufactured using approximate 1800±10% Denier warp yarn, with 1000±10% Denier linking yarn and 900±10% Denier weft yarn). The holster should be mounted on the belt and with adjustable mounting adapter for thigh (holster drop leg strap) for variety of operational needs as shown in the Figure given below.

Mounting of Holster

(The fig. is just for indication. The holster and other part shown may not be same as required by the customer)

3.4 Printing of fabric: The printed pattern shall meet the color fastness properties as given in Table 5.

3.5 Piping: Polyester piping shall be used to finish outer edges of *"Tactical Pistol Holster"*. The finished width of piping on face side of *"Tactical Pistol Holster"* shall be 12±5% mm. Piping shall be manufacture using 730±10% Denier polyester filament yarn and Weft: 330±10% Denier Polyester yarn. The Ends/inch and Picks/inch of the piping may be 66±4 and 26±2 respectively.



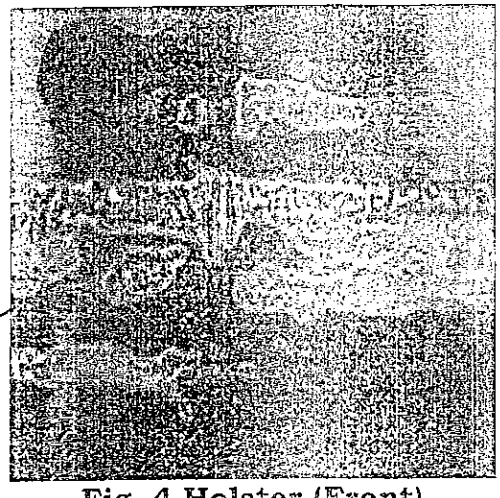


Fig. 4 Holster (Front)
(All measurements are in millimeter)

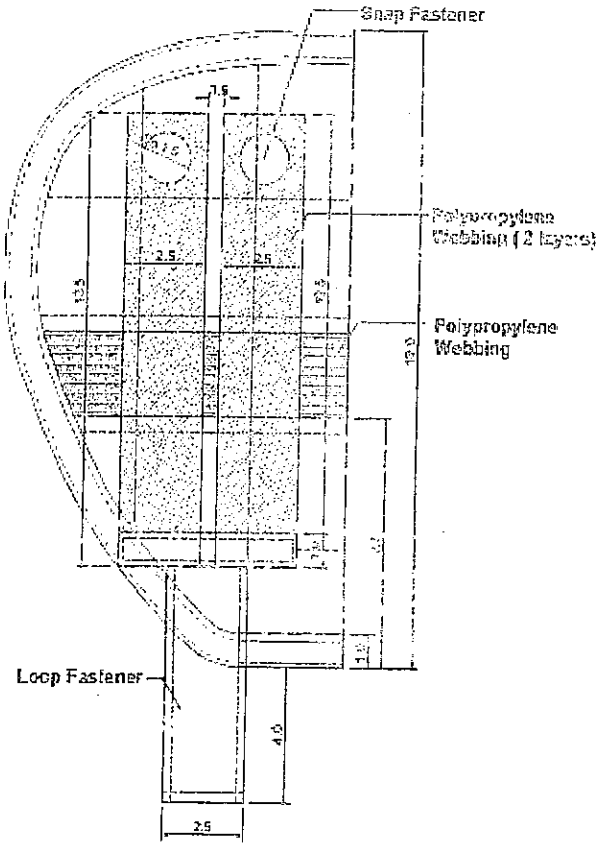
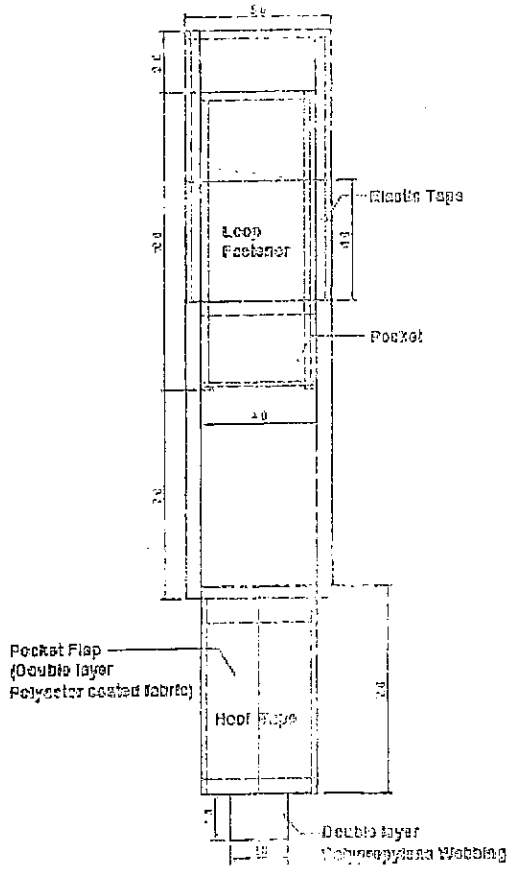


Fig. 5: Holster (Back)

(All measurements are in millimeter)



Side View (Opened)

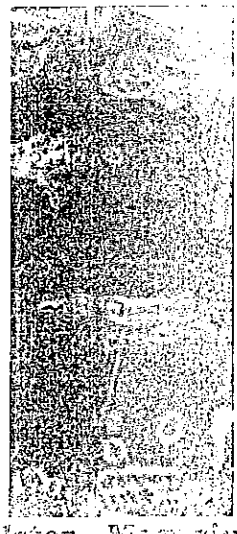


Fig.6 Holster - Magazine pocket
(All measurements are in millimeter)

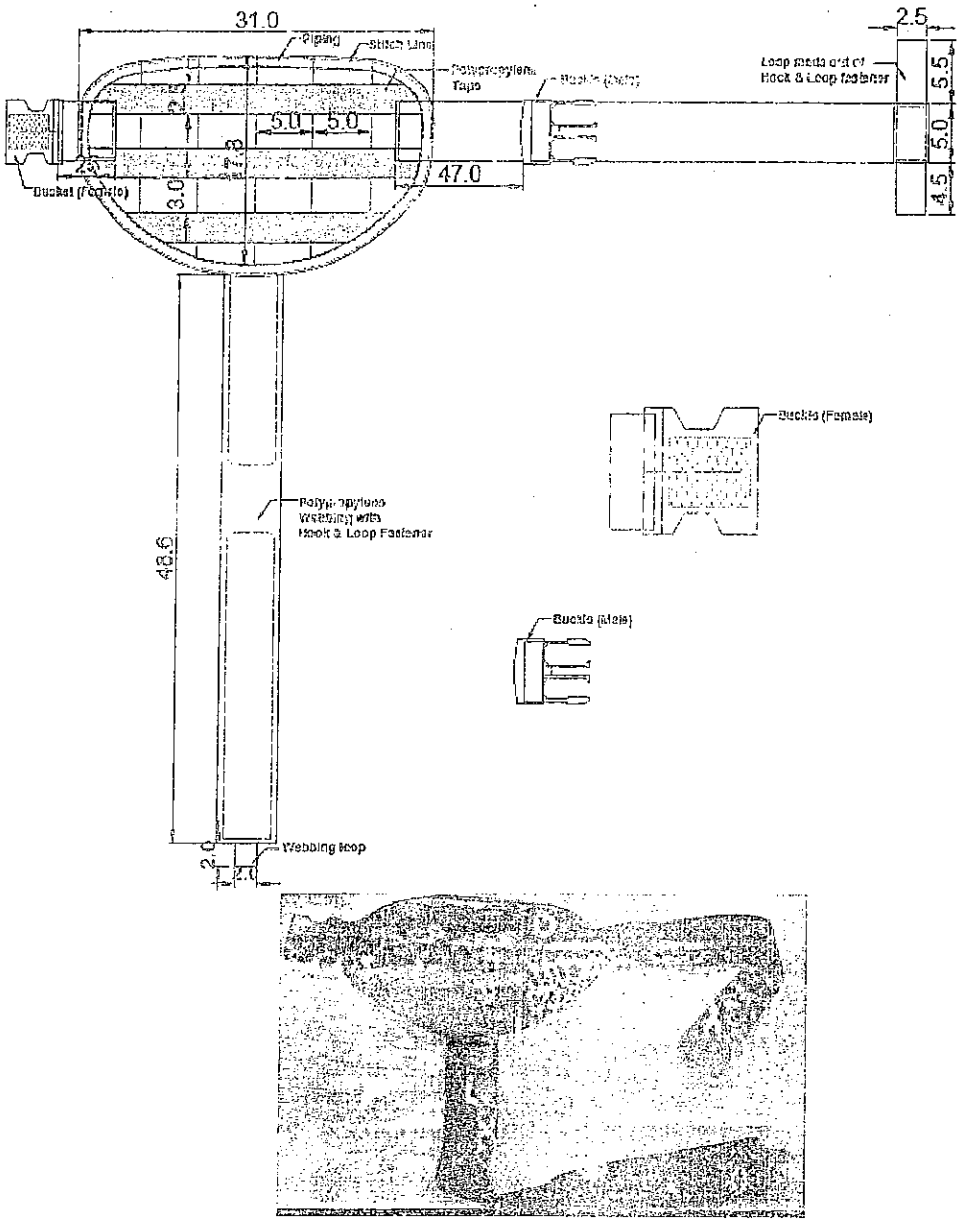
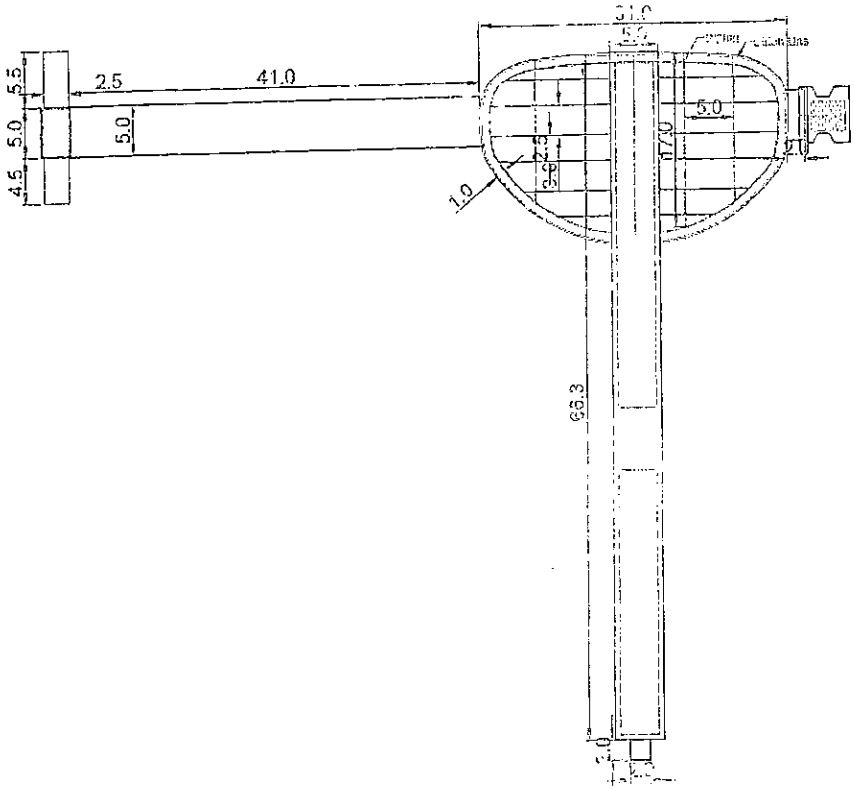


Fig. 7-Holster drop leg strap (Front side)



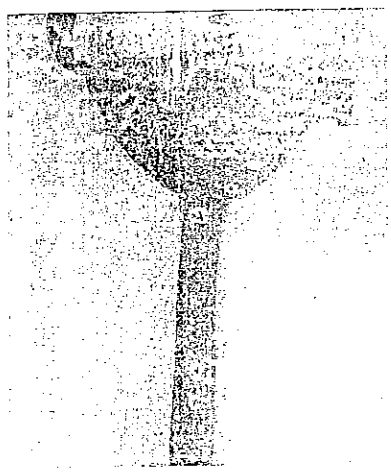


Fig. 8-Holster drop leg strap (Back side)

4.0 STITCHING:

4.1 Lock stitch shall be employed to assemble components of "Tactical Pistol Holster complete". Location and types of stitch can be seen in the "Tactical Pistol Holster Complete" sample held in the custody of

customer. In the case of Lock stitch, four stitches per cm shall be employed wherever stitching has to be carried out. The stitching shall be done with even tension and all loose ends shall be securely fastened off.

4.2 Green colour Nylon sewing threads conforming variety no. H_1 of IS: 4229 shall be used for the stitching.

NOTE: The vendor shall supply extra (at least one bobbin) same type of sewing thread as used in the stitching of "Tactical Pistol Holster" for testing purpose.

5.0 FREEDOM FROM DEFECT:

The "Tactical Pistol Holster complete" shall be visually examined. It shall be evenly stitched, free from missed stitches, holes, cuts, puckering and other defects. The colour of the sewing thread used for stitching shall not bleed or stains. The "Tactical Pistol Holster Complete" shall be free from dyeing & printing defects.

The "Tactical Pistol Holster Complete" shall be free from any other defect which may significantly mark the appearance or serviceability.

6.0 Sealed Sample:

In order to illustrate or specify the indeterminable characteristics such as general appearance, luster, feel and print design of the "Tactical Pistol Holster Complete", a sample has been agreed upon and sealed, the supply shall be conformity with the sample in such respects.

The custody of the sealed sample shall be a matter of prior agreement between the buyer and seller.

7.0 MARKING

The "Tactical Pistol Holster Complete" shall be legibly and indelibly marked with the following information:

(a) Manufacturer's name, initials or trade-mark;
(b) Instructions for storage and care;
(c) Date of manufacture; and
(d) Any other information required by the law in force and/or by the buyers.

8.0 PACKAGING & PACKING

The "Tactical Pistol Holster Complete" shall be delivered in a clean and dry condition. Ten such "Tactical Pistol Holster Complete" shall be made into one unit pack (bundle) by suitably folding, placing one over the other and then suitably tying them with three ply twine jute (IS: 1312).

Four such bundles shall form one bale. These bales shall be packed in such a way that it ensures full protection to the contents of the bale. Hessian cloth shall be used to cover the bale. This cloth shall securely sewn around the bale. The bale shall be stitched with double three ply jute twine with not less than twelve stitches per dm, taking care not to pierce the inner wrapping during stitching. Sufficient Hessian cloth shall be pulled out each other to form 'ears' of about fifteen cms in length. The bale shall be suitably secured by fastening with 12 mm polypropylene strap.

Before dispatch each bale/package shall be legibly marked by stencil showing the following information:

i) Nomenclature and Category number of the store
ii) Quantity packed in the bale/package
iii) Serial number of the bale/package
iv) Month & Year of packing
v) Name/Trademark of the Manufacture
vi) Gross weight of the bale/package in Kg.
vii) Name & Address of the consignee
viii) Inspection note number and date

9.0 SAMPLING AND CRITERIA FOR CONFORMITY

9.1 The sampling procedure detailed in 9.2 to 9.3 shall give desired protection to the buyer and the seller, provided that the lot submitted for inspection is homogeneous. To achieve this, the manufacturer shall maintain a system of process control at all stages of manufacturing ensuring the "Tactical Pistol Holster complete" tendering by him for inspection to comply with the requirements of this standard in all respects.

9.2 The manufacturer should offer the stores serially numbered and arranged in such a way that the entire lot is accessible to the inspecting officer. The conforming of a lot to the requirement of this specification shall be determined on the basis of the tests carried out on the samples selected from it. The number of samples shall be selected at random in accordance with Table 3.

9.3 The number of test samples and the criterion for conformity for various characteristics shall be as given in Table 4.

9.4 **Lot:** For the purpose of conformance inspection and test sampling, a lot is defined as all the completed "Tactical Pistol Holster Complete" of the same size and type, with same assemblies,

produced in one facility, using the same production processes and materials, and being offered for delivery at one time to buyer against a dispatch note.

Table 3: "Tactical Pistol Holster Complete" to be selected from a lot and permissible number of non-conforming Tactical Pistol Holster(s)

Lot size	Non – Destructive Testing		Destructive Testing	
	No. of Tactical Pistol Holster(s) Complete to be selected	Permissible number of non-conforming Tactical Pistol Holster(s) complete	No. of Tactical Pistol Holster(s) complete to be selected	Permissible number of non-conforming Tactical Pistol Holster(s) Complete
(1)	(2)	(3)	(4)	(5)
0 – 300	10	1	2	0
301 – 500	20	2	3	0
501 – 1000	30	3	5	0
1001 – 3000	50	5	8	0
3001 and above	80	5	13	1

Table 4: Criterion for conformity

Characteristics	Number of test samples	Criteria for conformity
Dimensions, Nos. of ends and picks of the fabric used in manufacture of Pistol holder and freedom from defects	All the Tactical Pistol Holster(s) Complete selected according to the column 2 of Table 3	Non-conforming Tactical Pistol Holster(s) Complete not to exceed the corresponding number given in column 3 of Table 3
Weight of both parts of the Pistol Holder Complete	All the Tactical Pistol Holster(s) Complete selected according to the column 2 of Table 3.	Each observed value satisfies the relevant requirement
Colour fastness to various agencies	All the Tactical Pistol Holster(s) Complete selected according to the column 4 of Table 3	Non-conforming Tactical Pistol Holster(s) Complete not to exceed the corresponding number given in column 5 of Table 3

10.0 REQUIREMENTS

10.1 The Disruptive pattern polyester coated fabric (H1, H4 and L1) used in the manufacture of "Tactical Pistol Holster Complete' shall conform to the requirements as given in Table 6. Specification for colour of this fabric shall be as given in Table 7A to 7C.

NOTE: The vendor shall supply extra (at least 1 X 1 Sq meter) same type of Disruptive pattern polyester coated fabric as used in the "Tactical Pistol Holster Complete" for testing purpose.

10.2 The requirement of Layer L4 (warp knitted fabric) is given in Table 6.

NOTE: The vendor shall supply extra (at least 1 X 1 Sq meter) same type of warp knitted fabric as used in the "Tactical Pistol Holster Complete" for testing purpose.

10.3 The other layers used in the manufacturing of "Tactical Pistol Holster Complete" shall conform to the requirements as given in the Table 1 and Table 2.

10.4 The piping cloth (25±5% mm wide) shall be manufactured using polyester multifilament yarn of 225±10% Denier for warp and weft direction. Weave of the piping shall be plain. The requirements of piping are given in the Table-8.

NOTE: The vendor shall supply extra (at least five meters) same type of piping as used in the "Tactical Pistol Holster Complete" for testing purpose.

10.5 Two different width Polypropylene webbing of 25±1 mm and 50±1 mm wide shall be used. The colour of the webbing shall be green. In the holster part, two types of 25±1 mm webbing shall be used. One of the

tapes used in the formation of Belt loop. The thickness of this webbing shall be 3.5±0.2 mm. The other 25±1 mm webbing used in the formation of Loops and shall have thickness 1.7±0.2 mm. The requirements of Nylon webbing are given in the Table-9.

NOTE: The vendor shall supply extra (at least five meters) same type of webbing as used in the "Tactical Pistol Holster Complete" for testing purpose.

10.6 The Hook and Loop fasteners (20±1 mm and 40±1 mm wide) shall meet the requirements of shear strength and endurance test as given in IS 3135: 1994 RA 2004. The Hook and loop fastener shall be made off Nylon. The colour of the Hook and Loop faster should be green.

NOTE: The vendor shall supply extra (at least ten meters) same type of Hook and Loop fastener as used in the "Tactical Pistol Holster Complete" for testing purpose.

10.7 The requirements of quick release buckle are given in Table-10.

10.8 The weight of the "Tactical Pistol Holster Complete" shall meet the requirements as given in clause 3.1.

Table 5 : Requirements of Disruptive pattern polyester coated fabric (Layers-H1, L1 and H4) for Holster and holster drop leg strap of "Tactical Pistol Holster Complete'

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of fibre/filament	Polyester	IS 667: 1981
2	Nature of coating	Polyphenylene sulfide (PPS)	Using differential scanning colorimeter (DSC) and FTIR
3	Weave	Plain-1 up 1 down	Visual
4	End/inch	25±2	IS 1963:1981
5	Picks/inch	25±2	IS 1963:1981
6	Mass, g/m²	270±10	IS 1964 : 1970
7	Mass of de-proofed fabric, g/m²	170±10	After de-proofing (using any suitable solvents like diphenyl ether, n-methyl pyrrolidone, n cyclohexylpyrrolodine etc.) determine mass as per IS 1964 : 1970
8	Colour fastness to washing - Change in colour - Staining on adjacent fabric	 4 or better 4 or better	IS/ISO 105 – C10 B(2): 2006
9	Colour fastness to rubbing - Dry - Wet	 4 or better 4 or better	IS 766:1988
10	Colour fastness to light	4 or better	IS 2454:1985

Table 6 : Requirements of warp knitted fabric (Layer-L4) for holster drop leg strap of "Tactical Pistol Holster Complete"

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of fibre/filament	Polyester	IS 667: 1981
2	Knit	Warp Knit mesh	Visual
3	Mass, g/m^2	160±10	IS 1964 : 1970
4	Colour fastness to washing - Change in colour - Staining on cotton fabric	4 or better 4 or better	IS/ISO 105 – C10 B(2): 2006
5	Colour fastness to rubbing - Dry - Wet	4or better 4 or better	IS 766:1988
6	Colour fastness to perspiration -Change in colour -Staining on cotton fabric	4 or better 4 or better	IS 971: 1983
7	Colour fastness to light	5 or better	IS 2454:1985
8	Colour	Green	Visual

Table-7A: Specification of colour of Disruptive pattern coated fabric for Holster and holster drop leg strap of "Tactical Pistol Holster Complete"
(Olive Green)
(AATCC Test method 173 & AATCC Evaluation Procedure 7)

Colour	:	OLIVE GREEN
System	:	CIE LCH
Illuminant Observer	:	D 65
Standard Observer	:	10 Degree

Tristimulus Values :

X	Y	Z
4.103	4.654	4.176

L C H :

L	C	H
25.725	5.988	135.782

CMC (l:c)	:	2:1
Colour difference, ΔE_{cmc}	:	≤ 3.5

Interpretation of Results :

i) If ΔE_{cmc} is less than or equal to 3.5, then sample is acceptable.
ii) If ΔE_{cmc} is greater than 3.5, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

Table-7B: Specification of colour of Disruptive pattern coated fabric for Holster and holster drop leg strap of "Tactical Pistol Holster Complete"
(Khaki)
(AATCC Test method 173 & AATCC Evaluation Procedure 7)

Colour	:	KHAKI
System	:	CIE LCH
Illuminant Observer	:	D 65
Standard Observer	:	10 Degree

Tristimulus Values :

X	Y	Z
16.918	17.722	10.822

L C H :

L	C	H
49.157	19.275	87.970

CMC (l:c)	:	2:1
Colour difference, ΔE_{cmc}	:	≤ 3.5

Interpretation of Results :

iii) If ΔE_{cmc} is less than or equal to 3.5, then sample is acceptable.
iv) If ΔE_{cmc} is greater than 3.5, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 175.

Table 7C: Specification of colour of Disruptive pattern coated fabric for Holster and holster drop leg strap of "Tactical Pistol Holster Complete"

(Brown)

(AATCC Test method 173 & AATCC Evaluation Procedure 7)

Colour	:	**BROWN**
System	:	**CIE LCH**
Illuminant Observer	:	**D 65**
Standard Observer	:	**10 Degree**

Tristimulus Values :

X	Y	Z
5.616	5.640	4.432

L C H :

L	C	H
28.485	8.448	63.758

CMC (l:c)	:	2:1
Colour difference, ΔE_{cmc}	:	3.5

Interpretation of Results :

i) If ΔE_{cmc} is less than or equal to 3.5, then sample is acceptable.
ii) If ΔE_{cmc} is greater than 3.5, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

Table 8 : Requirements of "Tactical Pistol Holster Complete" – Piping

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of fibre/filament	Polyester	IS 667 : 1981
2	Mass /linear meter, g	6.5±1	IS 1964: 1970
3	Colour fastness to Washing - Change in colour - Staining on adjacent fabric	 4 or better 4 or better	IS/ISO 105 – C10 B(2): 2006
4	Colour fastness to Light	4 or better	IS 2454:1985

Table 9 : Requirements of "Tactical Pistol Holster Complete" – Webbing

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of fibre/filament	Polypropylene	AATCC 20: 2011
2	Mass/Linear meter, g - 50 mm webbing - 25 mm webbing - 20 mm webbing	 45±3 25±3 6±1	IS 1964: 1979
2	Colour fastness to Washing - Change in colour - Staining on adjacent fabric	 4 or better 4 or better	IS 764 : 1979
3	Colour fastness to Light	4 or better	IS 2454:1985
4	Dimensional Change due to relaxation, both directions, percentage, maximum	2.0	As per guidance of IS 2977 :1989
5	pH value of aqueous extract	6.0-8.5	IS 1390 (Cold method) :1983

Table 10: Requirements of "Tactical Pistol Holster Complete" -

Quick release buckle

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of material	Nylon	-Nylon is Soluble in formic acid -Melting point of Nylon is 215°C to 220°C
2	Resistance to accelerated ageing	No apparent change of aged samples in comparison to the original sample in respect of softening, brittleness, colour, tackiness etc.	Keep sample in hot air circulating oven at 70±1°C for 24 hrs.
3	Resistance to low temperature	No apparent change of test samples in comparison to the original sample in respect of brittleness & crackness when bent at 180° and back.	Keep sample in deep freezer at -10°C for 24 hrs.
4	Colour fastness to light	4 or better	IS 2454:1985
5	Pull load, Kgf. (Min) for quick release buckle only	45 (The male and female part shall not in any case come out either due to slippage or breakage)	By applying load between male and female part of the buckle at a speed of 100 mm/minute

Part-2 : Tactical Pistol Holster Only

Part-2: Tactical Pistol Holster Only

11.0 MATERIAL AND MANUFACTURE

11.1 The design and shape of the "Tactical Pistol Holster only" shall be as per Fig.4 to 6. The figure-1 shows "Tactical Pistol Holster" ***(Weight: 180 to 200g).***

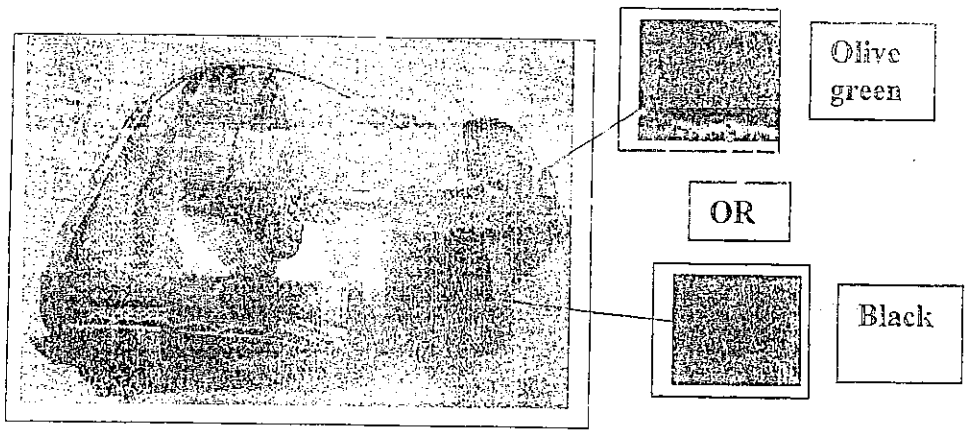


Fig. 1 "Tactical Pistol Holster" (The holster fabric shall be either black colour or Olive green as per the requirement of the customer.

11.2 "Tactical Pistol Holster" shall be made using four layers. The four layers of Holster part are coded as H1, H2, H3 and H4. The layer-H1 and layer-H4 are made off with disruptive pattern printed (Dark green, Light green, Brown and Black) polyester plain weave fabric [Back side shall be coated with Polyphenylene sulfide (PPS)]. The composition of Layer-H2 and H3 are given in Table-1. The arrangement of all layers is shown in the Fig. 2.

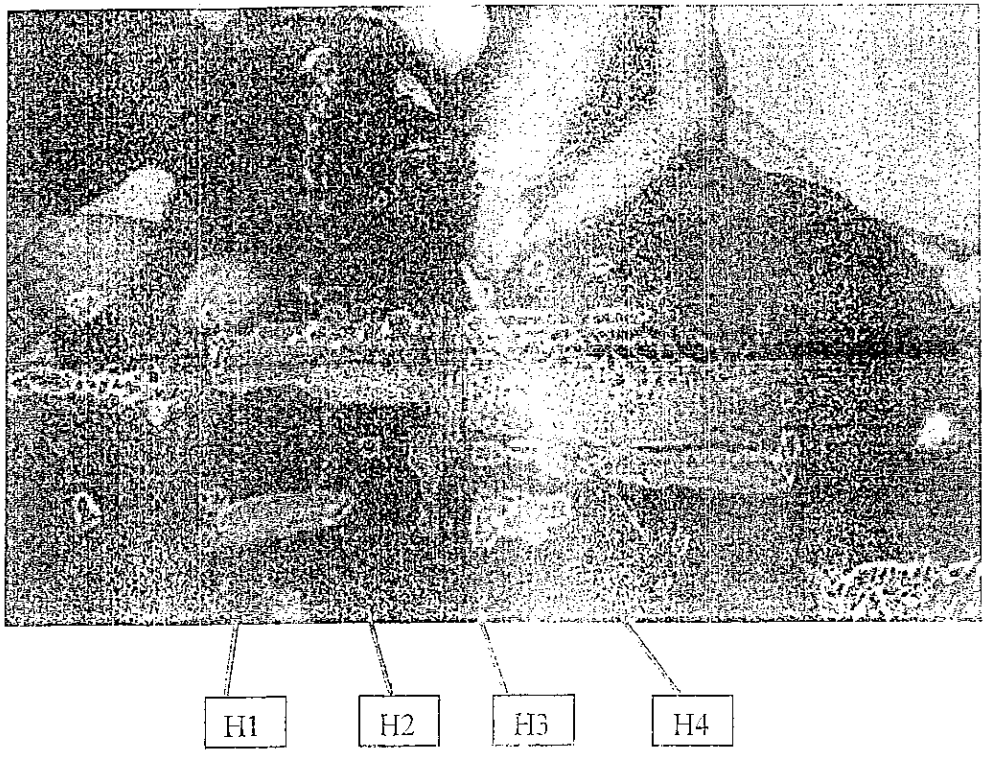


Fig. 2 : Holster- Four Layers (H1, H2, H3 & H4)

Table-1 Properties of Layers of Holster part

Characteristics	Test Method	Requirement			
		Layer-H1	Layer-H2	Layer-H3	Layer-H4
Identification of material	Differential scanning colorimeter (DSC) and FTIR	Polyester coated with PPS	Polyethylene + Polypropylene + Polyester with some filler to make hard	Polyethylene based materials	Polyester coated with PPS
Thickness, mm	ASTM D 374 (By screw gauge method)	0.42-0.45	0.9-1.1	4.2-4.4	0.42-0.45
Hardness,		-	50±3 (Shore D)	20±2 (Shore A)	-
Mass, g/m²	IS 1964 : 1970	Refer Table-4	1200±50	500±25	Refer Table-4

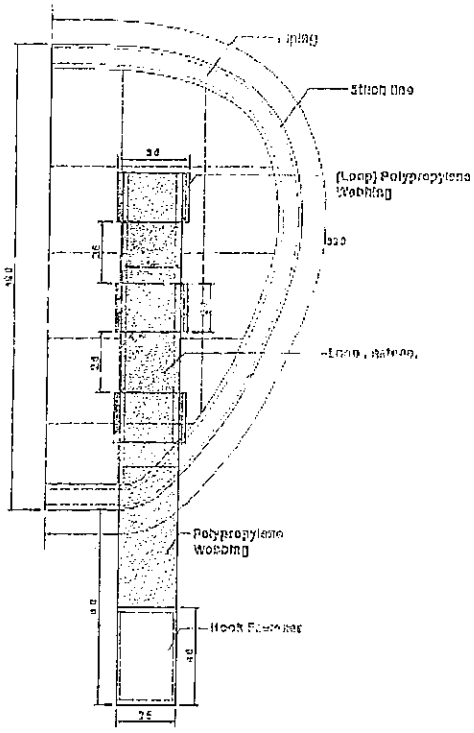
The dyed (Olive green or Black) woven fabric (1 up 1 down plain weave) shall be manufactured using continuous multifilament (740 ±5% Denier) yarns of Polyester on warp and weft direction. The selvedges of the fabric shall be firm and straight. The fabric shall be 'Heat set' and fully shrunk. The back side of the fabric shall be coated with Polyphenylene sulfide (PPS), which has good heat resistance property. The coating shall be smooth and it should firmly adhere to the fabric. The coated fabric shall be pliable and free from tackiness, stains, pinholes, surface irregularities, wrinkles, patches and all other coating defects. The coating shall not have any objectionable odor.

11.3 The holster shall have a safety hood over the hammer of pistol (when pistol is in the holster) to prevent the release of pistol. The hood shall be made using hook and loop fastener. It should have an adjustable and removable belt loop (Manufacture using Polypropylene webbing). The holster shall be provided with height adjustment facility using holster drop leg strap. Holster shall be designed in such a way that right and left handed shooters can use it easily. Figs 4 to 6 may be referred to get idea of location and dimensions.

Holster shall be provided with a magazine pocket and closing and opening of this pocket shall be carried out using hook and loop fasteners. The loop fastener is stitched on the pocket and loop fastener on the flap of pocket. Below the loop fastener an elastic tape (Good quality) shall also be provided so the magazine remains tightly fixed inside the pocket Fig. 6. The pocket shall be fabricated with same PPS coated Polyester (Disruptive print) fabric as used in H1 and H4. For more clarification sample held in the custody of customs may be seen.

11.4 Dyeing of fabric: The dyed fabric shall meet the color fastness properties as given in Table 4.

11.5 Piping: Polyester piping shall be used to finish outer edges of *"Tactical Pistol Holster only"*. The finished width of piping on face side of *"Tactical Pistol Holster only"* shall be 12±5% mm. Piping shall be manufacture using 730±10% Denier polyester filament yarn and Weft: 330±10% Denier Polyester yarn. The Ends/inch and Picks/inch of the piping may be 66±4 and 26±2 respectively.



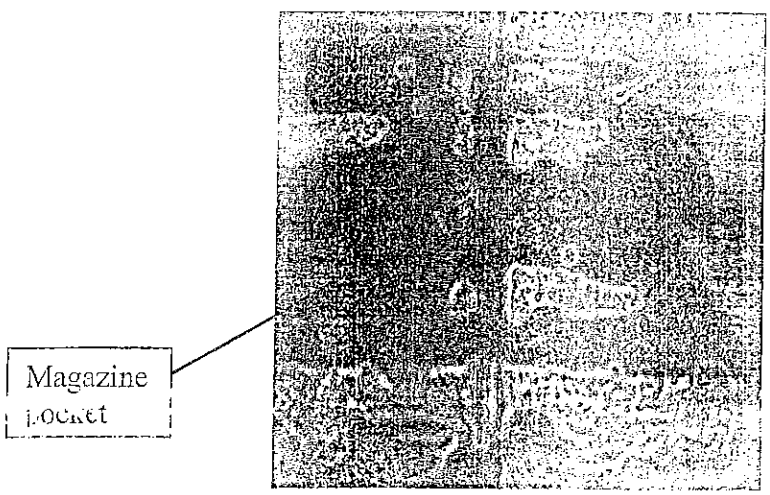
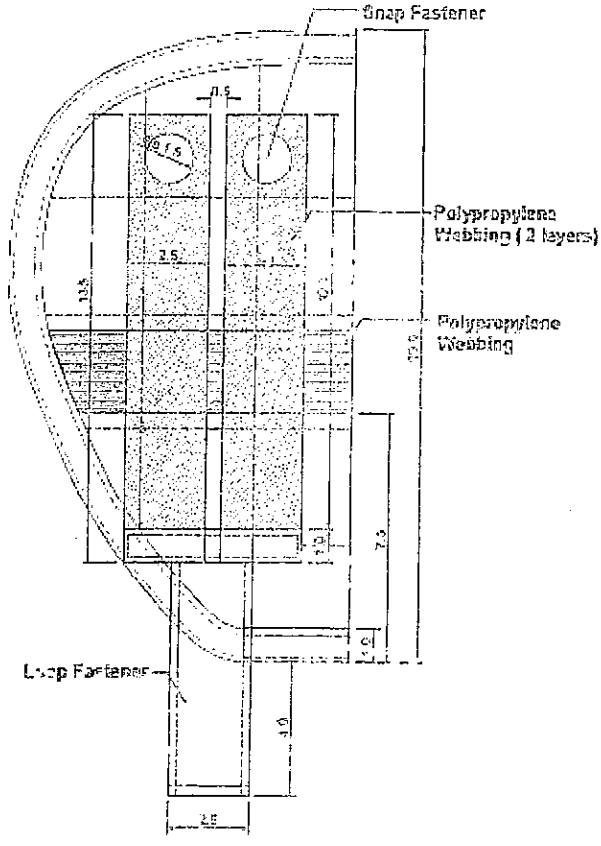


Fig. 4 Holster (Front)
(All measurements are in millimeter)



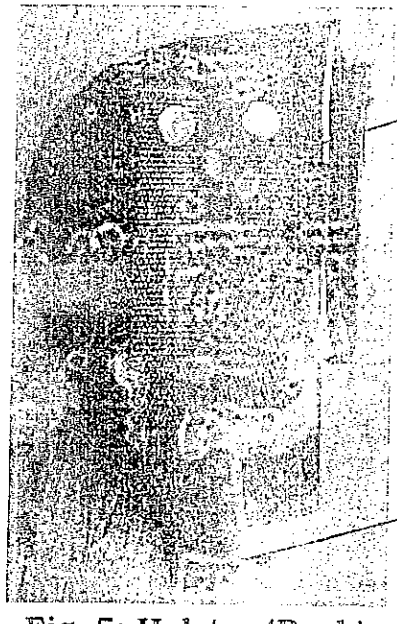
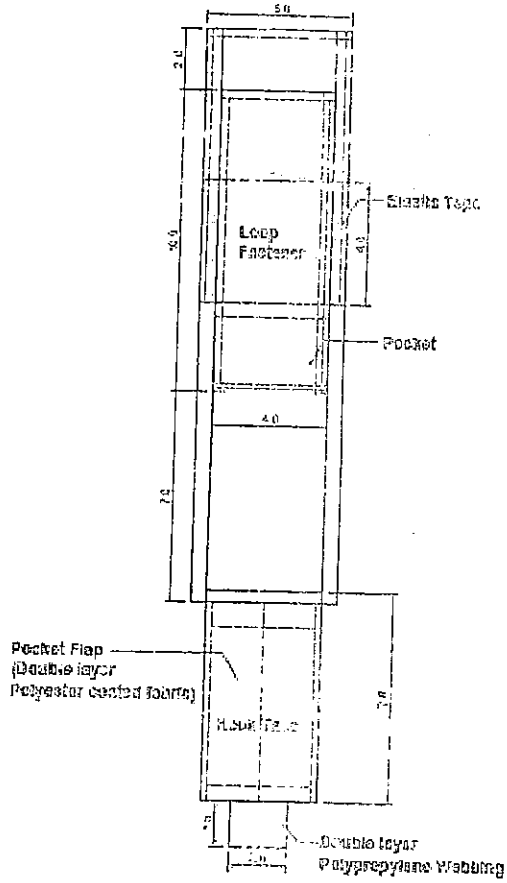


Fig. 5: Holster (Back)
(All measurements are in millimeter)



Side View (Opened)

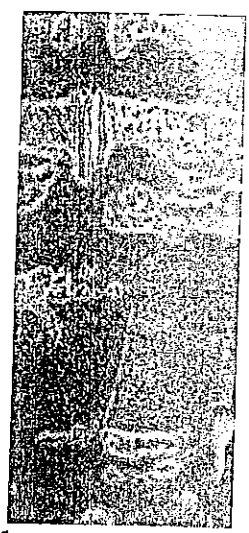


Fig.6 Holster - Magazine pocket
(All measurements are in millimeter)

12.0 STITCHING:

12.1 Lock stitch shall be employed to assemble components of "Tactical Pistol Holster". Location and types of stitch can be seen in the "Tactical Pistol Holster" sample kept in the custody of customer. In the case of Lock stitch, four stitches per cm shall be employed wherever stitching has to be carried out. The stitching shall be done with even tension and all loose ends shall be securely fastened off.

12.2 Green colour Nylon sewing threads conforming variety no. B1 of IS: 4229 shall be used for the stitching.

NOTE: The vendor shall supply extra (at least one bobbin) same type of sewing thread as used in the stitching of "Tactical Pistol Holster" for testing purpose.

13.0 FREEDOM FROM DEFECT:

The "Tactical Pistol Holster only" shall be visually examined. It shall be evenly stitched, free from missed stitches, holes, cuts, puckering and other defects. The colour of the sewing thread used for stitching shall not bleed or stains. The "Tactical Pistol Holster only" shall be free from dyeing defects.

The "Tactical Pistol Holster only" shall be free from any other defect which may significantly mark the appearance or serviceability.

14.0 Sealed Sample:

In order to illustrate or specify the indeterminable characteristics such as general appearance, luster, feel and print design of the "Tactical Pistol Holster only", a sample has been agreed upon and sealed; the supply shall be conformity with the sample in such respects.

The custody of the sealed sample shall be a matter of prior agreement between the buyer and seller.

15.0 MARKING

The "Tactical Pistol Holster only" shall be legibly and indelibly marked with the following information:

(e) Manufacturer's name, initials or trade-mark;
(f) Instructions for storage and care;
(g) Date of manufacture; and
(h) Any other information required by the law in force and/or by the buyers.

16.0 PACKAGING & PACKING

The "Tactical Pistol Holster only" shall be delivered in a clean and dry condition. Ten such "Tactical Pistol Holster only" shall be made into one unit pack (bundle) by suitably folding, placing one over the other and then suitably tying them with three ply twine jute (IS: 1912).

Four such bundles shall form one bale. These bales shall be packed in such a way that it ensures full protection to the contents of the bale. Hessian cloth shall be used to cover the bale. This cloth shall securely sewn around the bale. The bale shall be stitched with double three ply jute twine with not less than twelve stitches per dm, taking care not to pierce the inner wrapping during stitching. Sufficient Hessian cloth shall be pulled out each other to form 'ears' of about fifteen cms in length. The bale shall be suitably secured by fastening with 12 mm polypropylene strap.

Before dispatch each bale/package shall be legibly marked by stencil showing the following information:

i) Nomenclature and Category number of the store
ii) Quantity packed in the bale/package
iii) Serial number of the bale/package
iv) Month & Year of packing
v) Name/Trademark of the Manufacture
vi) Gross weight of the bale/package in Kg.
vii) Name & Address of the consignee
viii) Inspection note number and date

17.0 SAMPLING AND CRITERIA FOR CONFORMITY

17.1 The sampling procedure detailed in 17.2 to 17.3 shall give desired protection to the buyer and the seller, provided that the lot submitted for inspection is homogeneous. To achieve this, the manufacturer shall maintain a system of process control at all stages of manufacturing ensuring the "Tactical Pistol Holster only" tendering by him for inspection to comply with the requirements of this standard in all respects.

17.2 The manufacturer should offer the stores serially numbered and arranged in such a way that the entire lot is accessible to the inspecting officer. The conforming of a lot to the requirement of this specification shall be determined on the basis of the tests carried out on the samples selected from it. The number of samples shall be selected at random in accordance with Table 2.

17.3 The number of test samples and the criterion for conformity for various characteristics shall be as given in Table 3.

7.4 Lot: For the purpose of conformance inspection and test sampling, a lot is defined as all the completed "Tactical Pistol Holster only" of the same size and type, with same assemblies, produced in one facility, using the same production processes and materials, and being offered for delivery at one time to buyer against a dispatch note.

Table 2: "Tactical Pistol Holster only" to be selected from a lot and permissible number of non-conforming Tactical Pistol Holster(s) only

Lot size	Non - Destructive Testing		Destructive Testing	
	No. of Tactical Pistol Holster(s) only to be selected	Permissible number of non-conforming Tactical Pistol Holster(s) only	No. of Sling(s) to be selected	Permissible number of non-conforming Tactical Pistol Holster(s) only
(1)	(2)	(3)	(4)	(5)
0 – 300	10	1	2	
301 - 500	20	2	3	0
501 - 1200	30	3	5	0
1201 - 3000	50	5	8	0
3001 and above	80	7	13	1

Table 3: Criterion for conformity

Characteristics	Number of test samples	Criteria for conformity
Dimensions, Nos. of ends and picks of the fabric used in manufacture of Pistol holder and freedom from defects	All the "Tactical Pistol Holster(s)" only selected according to the column 2 of Table 2	Non-conforming "Tactical Pistol Holster(s) only" not to exceed the corresponding number given in column 3 of Table 2
Weight of both parts of the Pistol Holder	All the "Tactical Pistol Holster(s) only" selected according to the column 2 of Table 2	Each observed value satisfies the relevant requirement
Colour fastness to various agencies	All the "Tactical Pistol Holster(s) only" selected according to the column 4 of Table 2.	Non-conforming "Tactical Pistol Holster(s) only" not to exceed the corresponding number given in column 5 of Table 2.

18.0 REQUIREMENTS

18.1 The Dyed polyester coated fabric (H1 and H4) used in the manufacture of "Tactical Pistol Holster only" shall conform to the requirements as given in Table 4. Specification for colour of this fabric shall be as given in Table 5A and 5B.

NOTE: The vendor shall supply extra (at least 1 X 1 Sq meter) same type of dyed polyester coated fabric as used in the "Tactical Pistol Holster only" for testing purpose.

18.2 The other layers used in the manufacturing of "Tactical Pistol Holster only" shall conform to the requirements as given in the Table 1.

18.3 The piping cloth (25±5% mm wide) shall be manufactured using polyester multifilament yarn of 225±10% Denier for warp and weft direction. Weave of the piping shall be plain. The requirements of piping are given in the Table-6.

NOTE: The vendor shall supply extra (at least five meters) same type of piping as used in the "Tactical Pistol Holster only" for testing purpose.

18.4 Two different width Polypropylene webbing of 25±1 mm and 50±1 mm wide shall be used. The colour of the webbing shall be of matching colour of fabric. In the holster , two types of 25±1 mm webbing shall be used. One of the tapes used in the formation of Belt loop. The thickness of this webbing shall be 3.5±0.2 mm. The other 25±1 mm webbing used in the formation of Loops and shall have thickness 1.7±0.2 mm. The requirements of Nylon webbing are given in the Table-7.

NOTE: The vendor shall supply extra (at least five meters) same type of webbing as used in the "Tactical Pistol Holster only" for testing purpose.

18.5 The Hook and Loop fasteners (20±1 mm and 40±1 mm wide) shall meet the requirements of shear strength and endurance tests as given in IS 8156: 1994 RA 2004. The hook and loop fastener shall be made off Nylon. The colour of the Hook and Loop faster should be matched with the colour of outer fabric (black or olive green).

NOTE: The vendor shall supply extra (at least ten meters) same type of Hook and Loop fastener as used in the "Tactical Pistol Holster" for testing purpose.

18.6 The weight of the "Tactical Pistol Holster" shall meet the requirements as given in clause 11.1.

Table 4 : Requirements of Dyed polyester coated fabric (Layers-H1 and H4) for "Tactical Pistol Holster only"

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of fibre/filament	Polyester	IS 667: 1981
2	Nature of coating	Polyphenylene sulfide (PPS)	Using differential scanning colorimeter (DSC) and FTIR
3	Weave	Plain-1 up 1 down	Visual
4	End/inch	25±2	IS 1963:1981
5	Picks/inch	25±2	IS 1963:1981
6	Mass, g/m^2	270±10	IS 1964 : 1970
7	Mass of de-proofed fabric, g/m^2	170±10	After de-proofing (using any suitable solvents like diphenyl ether, n-methyl pyrrolidone, n-cyclohexylepyrrolodine etc.) determine mass as per IS 1964 : 1970
8	Colour fastness to washing - Change in colour - Staining on cotton fabric	 4 or better 4 or better	IS/ISO 105 – C10 B(2): 2006
9	Colour fastness to rubbing - Dry - Wet	 4 or better 4 or better	IS 766:1988
10	Colour fastness to light	4 or better	IS 2454:1985

Table-5A: Specification of colour of dyed coated fabric for "Tactical Pistol Holster Only"
(Olive Green)
(AATCC Test method 173 & AATCC Evaluation Procedure 7)

Colour	:	OLIVE GREEN
System	:	CIE LCH
Illuminant Observer	:	D 65
Standard Observer	:	10 Degree

Tristimulus Values :

X	Y	Z
4.103	4.654	4.176

L C H :

L	C	H
25.725	5.933	135.782

CMC (l:c)	:	2.1
Colour difference, ΔE_{cmc}	:	≤ 3.5

Interpretation of Results :

i) If ΔE_{cmc} is less than or equal to 3.5, then sample is acceptable.
ii) If ΔE_{cmc} is greater than 3.5, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

Table-5B: Specification of colour of dyed coated fabric for "Tactical Pistol Holster only" (Black)

(AATCC Test method 173 : 2005 & AATCC Evaluation Procedure 7 : 2003)

Colour	:	BLACK
System	:	CIE LCH
Illuminant Observer	:	D 65
Standard Observer	:	10 Degree

Tristimulus Values :

X	Y	Z
2.276	2.376	2.806

L C H :

L	C	H
17.348	1.923	285.345

CMC (l:c)	:	2:1
Colour difference, ΔE_{cmc}	:	≤ 3.5

Interpretation of Results :

i) If ΔE_{cmc} is less than or equal to 3.5, then sample is acceptable.
ii) If ΔE_{cmc} is greater than 3.5, then sample is unacceptable.

Note-1 : Absorbance/reflectance/ transmittance are affected by surface characteristic features of the substrate. Therefore comparison should be made between samples of same type i.e., identical fabric construction parameters and filament/ fibre composition.

Note-2 : Test should be carried out after proper conditioning as per AATCC 173.

Table 6 : Requirements of "Tactical Pistol Holster only" – *Piping*

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of fibre/filament	Polyester	IS 667: 1981
2	Mass linear /meter, g	6.5±1	IS 1964: 1970
3	Colour fastness to Washing - Change in colour - Staining on adjacent fabric	4 or better 4 or better	IS/ISO 105 – C10 B(2): 2006
4	Colour fastness to Light	4 or better	IS 2454:1985

Table 7 : Requirements of "Tactical Pistol Holster only" –Webbing

Sl. No.	Characteristics	Requirements	Test Method
1	Nature of fibre/filament	Polypropylene	AATCC 20 & AATCC 20A
2	Mass/Linear meter, g - 50 mm webbing - 25 mm webbing - 20 mm webbing	50±3 25±3 6±1	IS 1964: 1970
2	Colour fastness to Washing - Change in colour - Staining on cotton fabric	4 or better 4 or better	IS/ISO 105 – C10 B(2): 2006
3	Colour fastness to Light	4 or better	IS 2454:1985
4	Dimensional Change due to relaxation, both directions, percentage, maximum	2.0	As per guideline of IS 2377 :1989
5	pH value of aqueous extract	6.0-8.5	IS 1390 (Cold method) :1983

ANNEX A
(Clause 2)
LIST OF REFERRED INDIAN STANDARDS

IS. No.	Title	IS. No.	Title
IS:397(Part I): 2003	Method for statistical quality control during production : Part I Control charts for variable	IS:1964:1970 (RA 2006)	Methods for determination of weight per square meter and weight per linear meter of fabric
IS:397 (Part II): 2003	Method for statically quality control during production: Part 2 Control charts for attributes and count of defects	IS: 1954:1990 (RA 2007)	Determination of length and width of woven fabric
IS:6359: 1971 (RA 2004)	Method for conditioning of Textiles	IS:ISO C10. C(3)	Method for determination of colour fastness of textile material to washing
IS:11161:2000 (RA 2007)	Textiles-seam types-classification and terminology	IS 766:1988. Reaffirmed 2004	Method for determination of colour fastness of textile material to rubbing
IS:3442:1980 (RA 2004)	Methods for identification of crimp and count of yarn removed from fabric	IS 2454:1985. Reaffirmed 2006	Method for determination of colour fastness of textile material to artificial light (Xenon lamp) pressing
IS:1963:1981 (RA 2004)	Method for determination of thread per unit length in woven fabric	IS 1390 : 1983 (RA 2004)	Method for determination of pH value of aqueous extract of textile materials
AATCC Evaluation Procedure 7	Instrumental assessment of the change in colour of a test specimen	AATCC Test method 20	Fibre analysis: qualitative
AATCC Test method 20A	Fibre analysis: quantitative		

Approved/ Not Approved

Prakash Mishra, IPS, DG CRPF

CRPF BSF A/ Rif BRP&D CISF ITBP NSG SSB