PN SPECIFICATION NO. 14/2021
PROMULGATION DATE: 28 OCTOBER 2021

BAND DRESS

Prepared by:

Directorate Indigenous Technical Development
Naval Headquarters NSSD,
West Wharf Road
KARACHI

Tel: 021 48508410
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PROMULGATION ORDER

1. This specification is hereby approved and promulgated for information, guidance and compliance by the relevant person.

2. The details contained in the specification are to be studied, interpreted and implemented with due regards to the interest of the Service.

SUGGESTIONS FOR AMENDMENT

1. The specification has been prepared to bring the test methods and procedures in line with up-to-date PN requirements and facilities held in Pakistan. CINS may request to amend any test requirement/ test procedure in light of the experience emanating from its inspection history, through the feedback form placed at Annex F. However, such an alteration will be effective when the amendment is promulgated by this Directorate, and will be effective on the contracts which materialize after the promulgation date of respective amendment.

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RECORD OF CHANGES /AMENDMENT

Amd No	Date	Letter of amendment and description	Signature and Date

PN SPECIFICATION 14/2021
(BAND DRESS)

0101. DESIGNATION

1. Band Dress.

0102. USAGE

1. Band Dress for PN Band Personnel.

0103. INTRODUCTION

1. This specification is promulgated by Directorate of Indigenous Technical Development. Naval Headquarters Karachi to provide necessary guidance to the potential manufacturers/ suppliers of the items mentioned herein. This specification is to be used for testing and deciding upon acceptance, or otherwise, of the items mentioned. Any alteration or addition in this specification can be suggested to ITD Wing. However, it cannot be implemented without prior approval of DITD. This specification supersedes and replace all other specifications / technical details promulgated earlier in relation to the items mentioned herein.

2. This specification includes **06** Annexes and consists **30** pages, including the cover.

0104. SCOPE

1. This specification covers the requirements of manufacturing, inspection, storage & packaging details for Band Dress. This specification lays down the standards to which the store shown under designation above should conform to. It defines and lays down the quality, standards and details of materials, manufacturing, workmanship and finish. It also lays down the details of testing, inspection, rejection, marking, packing and delivery, etc. of Band Dress.

2. The supplier/ manufacturer shall comply in every respect with the terms of this specification and ensure that the stores conform to it, in all respects.

0105. RELATED DOCUMENTS

1. The latest standards and documents that have been referred to in this specification are:

a.	AATCC-20A	Fiber analysis Quantitative
b.	AATCC-79	Absorbency of Textiles
c.	AATCC-08	Color fastness to Rubbing
d.	BS EN ISO-12945-2	Determination of fabric propensity to surface fuzzing and to pilling
e.	BS EN ISO-12947-1	Determination of the abrasion resistance of fabrics by the Martindale method
f.	ISO-7211/1	Determination of Weave pattern
g.	ISO-7211/2	Determination of number of Threads per unit Length

h.	ISO-7211/5	Determination of linear density of yarn removed from fabric
j.	BS 1006/ AATCC 16	Color fastness to light
k.	ISO-105-C06	Color fastness to Domestic and Commercial laundering
l.	ISO-105-D01	Color fastness to Dry Cleaning
m.	ISO-105-E01	Color fastness to Water
n.	ISO-105-E02	Color fastness to Seawater test
p.	ISO-105-E04	Color fastness to Perspiration
q.	ISO-105-J03	Calculation of Color Difference
r.	ISO-3801	Determination of Mass per unit Length and Mass per unit Area
s.	ISO-13934-01	Textile - Tensile Strength (N) of fabric
t.	ISO-9237:	Determination of Permeability of Fabric to Air

0106 TERMS & DEFINITIONS

1. Definitions for the terms used in this specifications are given at Annex A.

0107 TECHNICAL DETAILS OF BAND DRESS (FOR PN PERSONNEL)

1. The technical details of Band Dress for PN Band Personnel is enclosed at Annex B.

0108 FABRIC MANUFACTURING GUIDE LINE

1. The finished cloth shall match the reference/ standard and shall be equal to or better than the reference/ standard sample w.r.t characteristics for which the standard sample is referred.

a. Material. The material of summer band dress (White) is 100% Polyester and winter dress material consists of Blend (80% Polyester & 20% Cotton).

b. Color of the finished cloth shall match the standard sample. White cloth shall be fully bleached and supplemented with a Blue Violet Fluorescing Optical Brightener and Black fabric will be dyed with Sulphur dyes for cotton portion and Disperse for Polyester portion of fabric.

c. All cloth within one contract shall be dyed in the same manner.

d. The width of the finished cloth shall be (152.4 $\pm$ 2.54 cm) (60 $\pm$ 1 inch) inclusive of selvage.

e. The cloth shall be scoured, heat set and dyed finished with Soil release finish. Percent add-on of the soil release finish shall be in accordance with the manufacturer instructions.

f. The face of the cloth shall be peached finished.

g. The starch & protein content including chloroform- soluble and water soluble material of the cloth shall not exceed 03% when tested i.a.w. AATCC -97.

j. The finished cloth shall be furnished in continuous lengths of 40 meters (43.75 yards) and shall be put up on rolls.

k. The consignment / offered quantity shall be 40 meter & above for 80% of consignment/ offered quantity, 20 meter & above for 15% of consignment/ offered quantity, 12 meter for 5% of consignment/ offered quantity.

l. Maximum 04 pieces are allowed in single bolt/ roll of fabric.

m. Total length of Single Bolt /roll is 120+0.5 meter(≈131.3 yards)

n. Each roll shall be labelled or ticketed for fiber content

p. The face of the cloth shall be identified by stamping on that side with the word "Face" at each end of the roll.

q. Each bolt shall be marked or tagged for the No x pieces of fabric along with length of each pieces inside a single bolt.

r. Matching. The color and appearance of the dyed and finished fabric shall match with the reference/ standard sample when viewed at Data Color Spectrophotometer, illuminant of D-65 or under filtered tungsten lamps

s. Discoloration. The finished cloth shall have good fastness to light, dry cleaning, and sea water etc. Dimension stability and phenolic yellowing should be equal to or better than the reference/ standard sample.

t. Measurement Schedule Band Dress should be tailor made to measure as per individual size. Each band dress is to be trialed before final stitching.

0109. **QUALITY OF WORKMANSHIP AND FINISH**

1. Workmanship and finish of the fabric shall be equal to the reference/ approved sample/ sealed pattern. It shall be the best of its class and to the entire satisfaction of the INS. The white Fabric shall conform the parameters defined at Annex B of this specification. All properties and qualities which may not be defined in this specification i.e. feel/ finish etc. should be as per reference/ sealed/ approved sample. Reference/ sealed/ approved sample is to be obtained from DNS/ PNCSD and held with DNS/ PNCSD/ CINS, for future reference/ inspection/ stock sample etc.

0110. **TESTING:**

1. The material shall be subjected to tests laid down in this specification at Annex B of this specification. The material may also be subjected to such tests

which are deemed necessary by the Inspection Authority in order to determine their suitability. Inspecting authority reserves the right to get any B/R samples tested from any reputable Laboratory other than PN. However, any test considered important by Inspecting Authority other than Annex B. e.g. Cross sectional view of single filament, Strength, Dry Heat Shrinkage (DHY) %, Tenacity, Crimp force, Crimp extension, Crimps /cm, Crimp amplitude, Crimp length in yarn/ filament etc. or the test laid down in Annex B may also be conducted in order to check its suitability/ quality. Firm is liable to pay all the testing charges.

0111. **BATCH/ LOT SIZE AND NO OF SAMPLE**

1. No of samples drawn from bulk quantity/ offered store should be as per instructions of Inspecting Officer or according to following table for the Inspection/ testing:

Lot Size[(yards (0.91m)]	No. Sample x 02 meters each
300 ≥800	02
801≥22000	03
22001and over	05

0112. **ADVANCE SAMPLE OR PRE-PRODUCTION SAMPLE OR TENDER SAMPLE**

1. Advance sample or pre-production sample, when required, shall be submitted in accordance with terms of the contract for inspection and testing as per Annex B and approved by CINS. The minimum quantity required for quality assurance is 10 meter of fabric.

2. Whenever Tender, Advance or pre-production sample is not required, the suppliers/ manufacturer are advised in their own interest to submit to the Inspecting Officer or his representative an initial delivery of One % of the contract.

3. The approval of Tender, Advance or pre-production sample, authorizes the commencement of bulk production but does not relieve the suppliers/ manufactures from compliance with all the provisions of this specification.

4. One approved sample after rectification of all observations highlighted by Inspecting Officer/ end user shall be properly sealed by INS and returned to the firm for guidance; rest of the approved sample shall be retained by INS for future use in bulk Inspection.(If deemed necessary).

5. The Pre-production sample shall be manufactured by the manufacturer with the same facilities which will be used for manufacturing of the bulk items.

6. Firm shall provide advance sample along with quality verification reports from an accredited laboratory, whenever asked/ required by Inspecting authority to ensure compliance of quality assurance parameters during production/ final internal inspection.

0113 **INSPECTION**

1. Bulk representative sample. B/R random sampling will be carried out as per rules in vogue.

2. Bulk Inspection. Bulk inspection will be carried out after satisfactory completion of Visual Examination and Testing of B/R Sample.

3. Inspection of Band Dress. 100% of the offered store shall be inspected or as per predefine Stage inspection/ Third party inspection for Band Dress may be carried out (if desired) by Inspection Authority.

4. Inspection/ Acceptance and Rejection of Stores. Inspection/ acceptance is to be carried out to the entire satisfaction of Chief Inspector of Naval Stores and also as per instruction/ procedure laid down in official unit order instruction.

5. Common defects in fabric/ garment and Guide lines for fabric inspection of Band Dress are enclosed as Annex D & E respectively for consultation/ guideline. However, these guide lines may be considered by Inspecting officer in addition to Unit Instruction Order or as per order of Inspecting Authority.

6. The Band Dress shall be examined for the correctness of material, shape, design, dimension, size, workmanship and finish.

7. CINS reserves the right to reject the whole supply in case, upon examination, material or packing of any sample or portion of the consignment is found NOT CONFORMING the parameters laid down in this specification or the quality of product does not seems up to the mark.

8. If on examination of 5% of any delivery, 20% of those examined from bulk supply are found NOT CONFORMING to this specification in respect of the pattern, dimensions, workmanship and finish, the whole consignment may be rejected without any compromise.

9. All stores and packing NOT fully in accordance with this specification shall be rejected.

10. Responsibility for Compliance. The inspection set forth in this specification shall become a part of the supplier's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to PN for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements. However, this does not authorize submission of known defective material, either indicated or actual, nor does it commit PN to acceptance of defective stores (material).

11. Responsibility of contractor. The contractor is responsible for the performance of all inspection requirements (inspection/ examination and test) as specified here in. except as otherwise specified in the contract or purchase order. The contractor may use his own or any other facilities suitable for performance of the inspection requirements.

12. Replacement by the Contractor. The supplier/ manufacture is responsible for replacement of the consignment or any part there of whenever it is found to be not conforming to this specification or does not curtain its quality till the useful life of an item. The supplies so tendered in replacement, shall be subjected to testing/ inspection and acceptance by the Inspecting Officer.

13. Responsibility for Safety. The supplier/ manufacturer is wholly responsible for the safety of supplies during inspection, storage at firm's premises, proper Packing, dispatch and delivery up to consignee.

14. The CINS is the authority in all matters pertaining to Inspection.

15. Stamping of Accepted/ Rejected Stores by the Inspector. Following instructions are to be followed:

a Stamping of Accepted Stores. Each acceptable fabric shall be stamped with Inspector's Individual Acceptance Mark or as per Instructing of Inspecting Authority. The stamping shall be legible.

b Stamping of Rejected Stores. The rejected fabric/ Garment shall be marked with Inspector's Rejection Mark at the back/ visible place of fabric to avoid re-submission by the supplier.

0114. SPECIAL INSTRUCTIONS

1. Care Instructions. Care instructions in English and Urdu shall be attached with each Fabric/ Garment as indicated in the drawing and have minimum requirement as follows:

a. Washing procedure i.e. Dry Cleaning/ Laundering.

b. Ironing Procedure.

c. Drying procedure.

d. Dry cleaning procedure

e. Any Prohibition i.e. do not use bleach/ chlorinated water.

0115. PACKING DETAILS

1. The store when ordered to be delivered 'PACKED' shall be packed as per following instructions:

a. Each Band Dress shall be properly folded length wise.

b. The Band Dress shall be packed in a neat, dry and clean condition in polythene bag of suitable size. Moreover, said dress is to be further packed in suit cover.

0116. IDENTIFICATION LABEL

1. Each Band Dress shall bear following minimum information attached with Band Dress:

a. Item name/ item description with NSN/ Pattern No.

b. Material Composition.

c. Contract number and Date.

d. Year of manufacture.

e. Contractor's name, initials, or trade mark.

f. Batch no

g. Identification of face

0117. **PACKING LIST**

1. Firm is bound to provide a packing list of store offered for inspection along with the challan and each packed box giving full, which include complete details about the store i.e. Pattern No., Description of Store, size, quantity, Contract No, & date, challan No & date, I/Note No. or Voucher No. with date, Consignee, Firm's Name, Date of packing, Packer's Signature and Stowage/ Stacking Instruction.

0118. **MARKING OF STORES**

1. In addition to any special marking required by contract or order, the marking of packages shall be stenciled with quick drying Black ink/ Paint in accordance with Specification No. NS/MISC/002/80 with clearly defined characters as described below:

a. On Front and Top:

(1) Consignee Address.
(2) Contract No and date.
(3) Description of Stores Packed and NSN/ Patt no.
(4) Stowage / Stacking Instruction.
(5) Quantity of the Item/ White Fabric packed.
(6) Weight of the Carton

b. On Back:

(1) Manufacturers name / Firm's name.
(2) Voucher No. or Inspection Note No. and date.
(3) The No. of individual Package and the total No of Packages in the consignment joined by the word 'of 'e.g. 2 of 300.
(4) Weight of the package.
(5) Month and year of packing.

0119. **DELIVERY**

1. The consignment of store will be delivered in accordance with the terms of contract.

2. The store shall be delivered in Brand new, clean and dry condition.

3. The contractor/ manufacturer is fully responsible for the safety of the supplies during inspection, storage at firms and consignee premises proper packing, dispatch and delivery up to consignee.

XXXXXSDXXXXX

MUHAMMAD AFSAR
Captain Pakistan Navy
DID

Annexes:

ANNEX A TO
PN SPECIFICATION NO 14/2021
PROMULGATION DATE 28 OCT 21

TERMS & DEFINITIONS

1. **CINS:** Chief Inspector of Naval Stores

2. **PNCTA:** Pakistan Navy Central Testing Authority

3. **PNCSD:** Pakistan Navy Clothing Store Depot

4. **DNS:** Directorate of Naval Store.

5. **INSPECTOR:** The term inspector shall include the "Inspection Authority", inspecting officer and their representatives, duly authorized for the purpose of discharging inspection duties involved.

6. **INSPECTION AUTHORITY:** Chief Inspector of Naval Stores (CINS). His verdict in respect of Sealed Inspection matters is to be taken as final.

7. **INSPECTING OFFICER:** An officer nominated by the CINS for carrying out inspection of stores supplied by the supplier, against a specified contract or order, in accordance with the particulars stipulated therein.

ANNEX B TO
PN SPECIFICATION NO 14/2021
PROMULGATION DATE 28 OCT 21

TECHNICAL DETAIL OF WHITE/ BLACK FABRIC FOR BAND DRESS

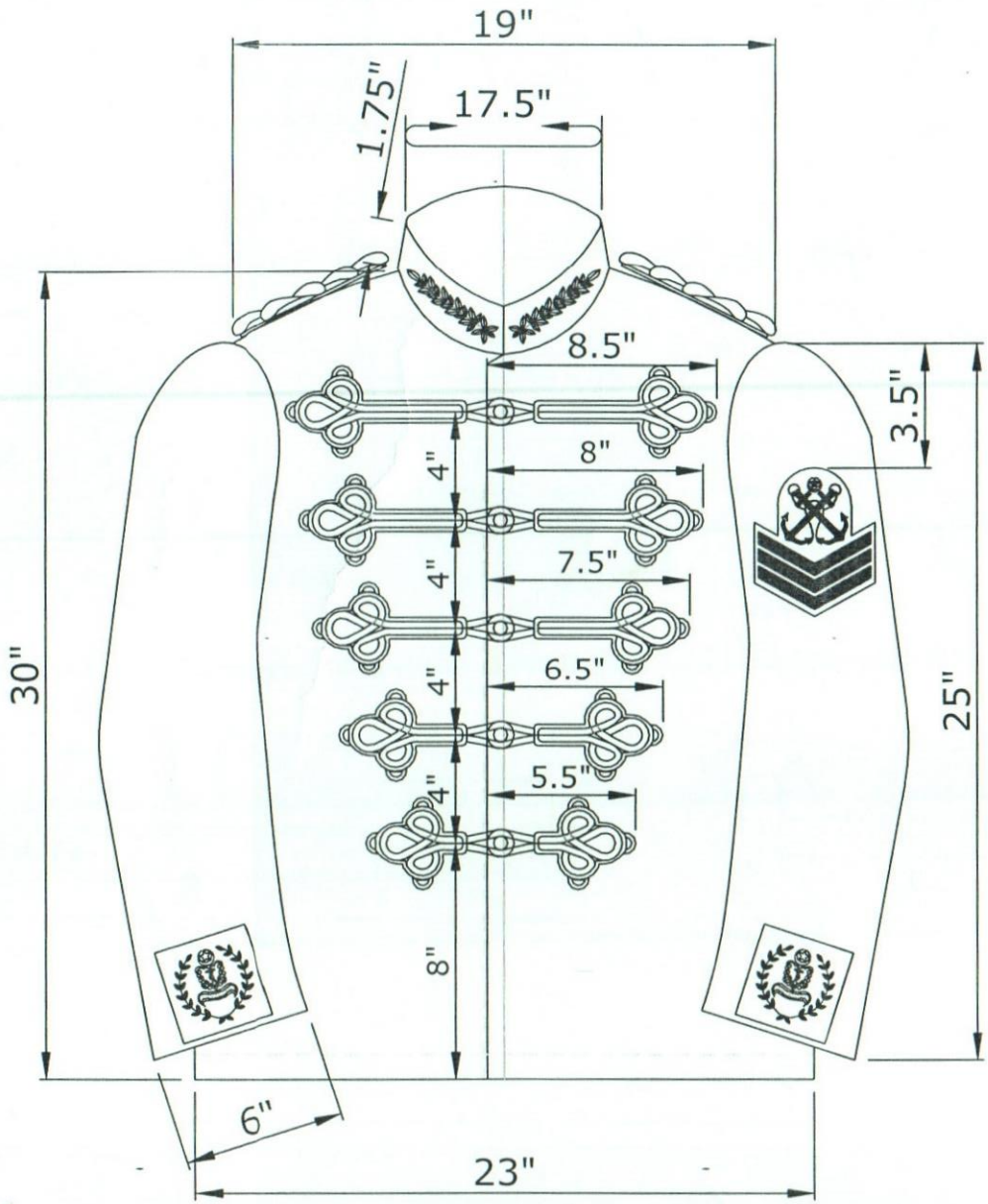
S NO	TESTS	METHODS	REQUIREMENT	
1.	**FABRIC**		**A WHITE**	**B BLACK**
a.	Material	AATCC 20A	Polyester 100%	Polyester 80% Cotton 20%
b.	Linear Density of yarn/ Count of Yarn (1) Warp (2) Weft	ISO-7211/5	 160 ± 5 Denier 160 ± 5 Denier	 175 ± 5 Denier 175 ± 5 Denier
c.	Twist type	Visual analysis	Single	Single
d.	Thread per Inch (1) Warp (2) Weft	ISO 7211/2	 140 ± 3 75 ± 3	 105 ± 3 75 ± 3
e.	Shade (Berger value)/ Whiteness	ISO 105-J03	Berger value= 150	Pantone = 19-4006 TCX ΔE= 1.89 or match with approved sample
f.	Weave pattern	ISO 7211/1	2x2 Twill	1x2 Twill
g.	Weight (gm/sq.meter)	ISO-3801	151 ± 5 gm	152 ± 5 gm
h.	Nature of dye	Chemical analysis	-	Sulphur + Disperse dye
j.	Color fastness to light	BS-1006 /AATCC16	4/5	4/5
k.	Color fastness to perspiration (1) Change in shade (2) Staining (a) Wool (b) Acrylic (c) Polyester (d) Nylon (e) Cotton (f) Acetate	ISO-105-E04	**Acid Alk** 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5	**Acid Alk** 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5
l.	Color Fastness to dry cleaning	ISO 105 D01	Fabric GS: 4/5 Solution GS: 4/5	Fabric GS:4/5 Solution GS: 4

m.	Color fastness to sea water (1) Change in shade (2) Staining (a) Wool (b) Acrylic (c) Polyester (d) Nylon (e) Cotton (f) Acetate	ISO 105 – E02	 4/5 4/5 4/5 4/5 4/5 4/5 4/5	 4/5 4/5 4/5 4/5 4/5 4/5 4/5
n.	Color fastness to water (1) Change in shade (2) Staining (a) Wool (b) Acrylic (c) Polyester (d) Nylon (e) Cotton (f) Acetate	BSEN ISO-105-E01	 4/5 4/5 4/5 4/5 4/5 4/5 4/5	 4/5 4/5 4/5 4/5 4/5 4/5 4/5
p.	Color fastness to Commercial laundering (1) Change in shade (2) Staining a) Wool b) Acrylic c) Polyester d) Nylon e) Cotton f) Acetate	ISO 105 C06	 4/5 4/5 4/5 4/5 4/5 4/5 4/5	 4/5 4/5 4/5 4/5 4/5 4/5 4/5
q.	Tensile Strength (N) (1) Warp (2) Weft	ISO-13934-01	 1570 ± 5 N 1040 ± 5 N	 925 ± 5 N 677 ± 5 N
r.	Crease Recovery	BS EN 22313	Warp = 75% ± 3% Weft = 80% ± 3%	Warp = 75% ± 3% Weft = 80% ± 3%
s.	Pilling resistance	BS EN ISO 12945-2	Grade= 4-5 (9000 cycles)	Grade= 4-5 (9000 cycles)
t.	Abrasion resistance after 10,000 cycles	BS EN ISO 12947-1	No weight Loss No thread break	No weight Loss No thread break
u.	Air permeability (mm/sec at 100 Pa)	ISO 9237	125 ± 5 mm/sec	285 ± 5 mm/sec
v.	Water absorbency (Drop test)	AATCC 79-2010	5 Sec ± 2 Sec	7 Sec ± 2 Sec
2.	**RETAINER HOOK**			

a.	Material	Chemical analysis	Mild Steel	Mild Steel
b.	Corrosion test	BS EN 396: 19974 4.4.1 & ISO 9227	No rust observed	No rust observed
3.	**LINING FABRIC MATERIAL SPECIFICATION**			
a.	Material	AATCC 20 A	Polyester	Polyester
b.	Count of yarn (1) Warp (2) Weft	ISO-7211/5	 45 ± 3 Denier 45 ± 3 Denier	 65 ± 3 Denier 65 ± 3 Denier
c.	Wt./ Sq. mtr	ISO-3801	68 ± 3 gm	95 ± 3 gm
d.	Thread/ inch (1) Warp (2) Weft	ISO-7211/2	 195 ± 3 135 ± 3	 160 ± 3 60 ± 3
e.	Weave	ISO-7211/1	1X2 Twill	1X2 Twill
f.	Color (Pantone)	Visual analysis	Pantone= 11-4800 TCX or match with approved sample	Pantone= 19-4006 TCX or match with approved sample
4.	**LINING FABRIC PERFORMANCE TESTING**			
a.	Color fastness to water (1) Wool (2) Cotton (3) Change in shade	BSEN ISO-105-E01	 4/5 4/5 4/5	 4/5 4/5 4/5
b.	Color fastness to rubbing (1) Change in shade (2) Staining	AATCC-08	-	 Dry=4 Wet=3/4
c.	Color fastness to perspiration Acid & Alkaline solution (1) Change in shade (2) Staining (a) Wool (b) Acrylic (c) Polyester (d) Nylon (e) Cotton (f) Acetate	ISO-105-E04	**Acid Alk** 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5	**Acid Alk** 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5
5.	**POCKET LINING CLOTH MATERIAL SPECIFICATION**			
a.	Material	AATCC 20 A	Cotton	PC Cloth
b.	Wt./ Sq. mtr in grams	ISO-3801	110 ± 5 gm	120 ± 5 gm
c.	Thread/ inch (1) Warp (2) Weft	ISO-7211/2	 110 ± 5 80 ± 5	 125 ± 5 70 ± 5
d.	Weave	ISO-7211/1	2X2 Twill	2X2 Twill

e.	Color (Pantone/ Shade)	Visual Analysis	Pantone= 11-4800 TCX or match with approved sample	Pantone= 19-4006 TCX or match with approved sample
6.	**POCKET LINING CLOTH PERFORMANCE TESTING**			
a.	Color fastness to water (1) Change in shade (2) Staining (a) Wool (b) Cotton	BS EN ISO-105-E01	 4/5 4/5 4/5	 4/5 4/5 4/5
b.	Color fastness to perspiration (1) Change in shade (2) Staining (a) Wool (b) Acrylic (c) Polyester (d) Nylon (e) Cotton (f) Acetate	ISO-105-E04	**Acid Aik** 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5	**Acid Aik** 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5 4/5
7.	**EMBROIDERY THREAD MATERIAL**			
a.	Material	AATCC 20 A	PC Thread	PC Thread
b.	Color	Visual Analysis	Pantone= 16-0836 TCX or match with approved sample	Pantone= 16-0836 TCX or match with approved sample
	Count of Yarn	ISO-7211/5	20^S	20^S
8.	**PEAK CAP**			
a.	Peak			
	(1) Upper (a) Material (b) Thickness	 AATCC 20 Visual anaylsis	 Black Glazed Rexene Plastic (0.40mm ± 0.05mm)	
	(2) Inner (a) Material (b) Colour (c) Thickness	 AATCC 20 Visual anaylsis physical anaylsis	 Rexene cloth Green 0.38±0.05mm	
	(3) Outer lining (a) Material (b) Thickness	 Chemical/ Analysis Visual anaylsis	 Glazed Plastic 0.12mm ± 0.02mm	
	(4) Sewing thread	AATCC 20	100% Polyester Black (19-4006 TCX)	
b.	Pattee round	Visyal anaylsis	Plastic sheet thickness 1.5mm	

c.	Lining round pattee (1) Inner (2) Outer (3) Shade (4) Outer Core (5) Absorbent Lining	Visyal anaylsis	 Rexene Cloth Black Stretchable Jersey Cloth 19-4006 TCX (Black) Glazed Plastic (Patent leather) Jersey cloth black
d.	Shank	Chemical analysis	Steel Black Lacquered
e.	Securing Bolt		Stainless Steel
f.	Badge Strong Thing	Visual Analyis	Rexene Cloth (1.8mm)
g.	Mohar Band		Cotton/PV (Polyester Viscose)
h.	Chin Strap (1) Material (2) Dia (3) Shade	 AATCC 20 Visyal anaylsis Visyal anaylsis	 Braided cord 0.7 ± 0.1 cm 16-0836 TCX (Golden)
j.	Securing Button	Chemical analysis	Gold plated (Brass) with anchor
k.	Buckle (1) Material (2) Shade (3) Thickness	 AATCC 20 Visyal anaylsis	 Braided 16-0836 TCX (Golden) 1.5 mm
l.	Eyelet/ Air vents	Chemical Analysis	Aluminum (Black Painted)
m.	Crown Ring	Cemical / Visual Analyis	Steel Chroming 17 SWG grommet joined with Brass Ferrule (Covered with Plastic tip).
n.	Crown Cover Cloth (1) Material (2) Width (3) Weave (4) Count of Yarn (5) Weight per Square meter (GSM) (6) Shade (7) Berger value	 AATCC 20A Visual analysis ISO-7211/1 ISO-7211/5 ISO-3801 Visual analysis ISO 105-J03	 100% Polyester 14480 ± 10 mm Double Knit 150 ± 10 Denier 197 gram White 150±5
p.	Embroidery Material (1) Material (a) Outer (b) Inner (2) Colour (Golden Pantone)	 AATCC 20A Visual analysis	 Tilla P.C (Embroidery thread) 16-0836 TCX

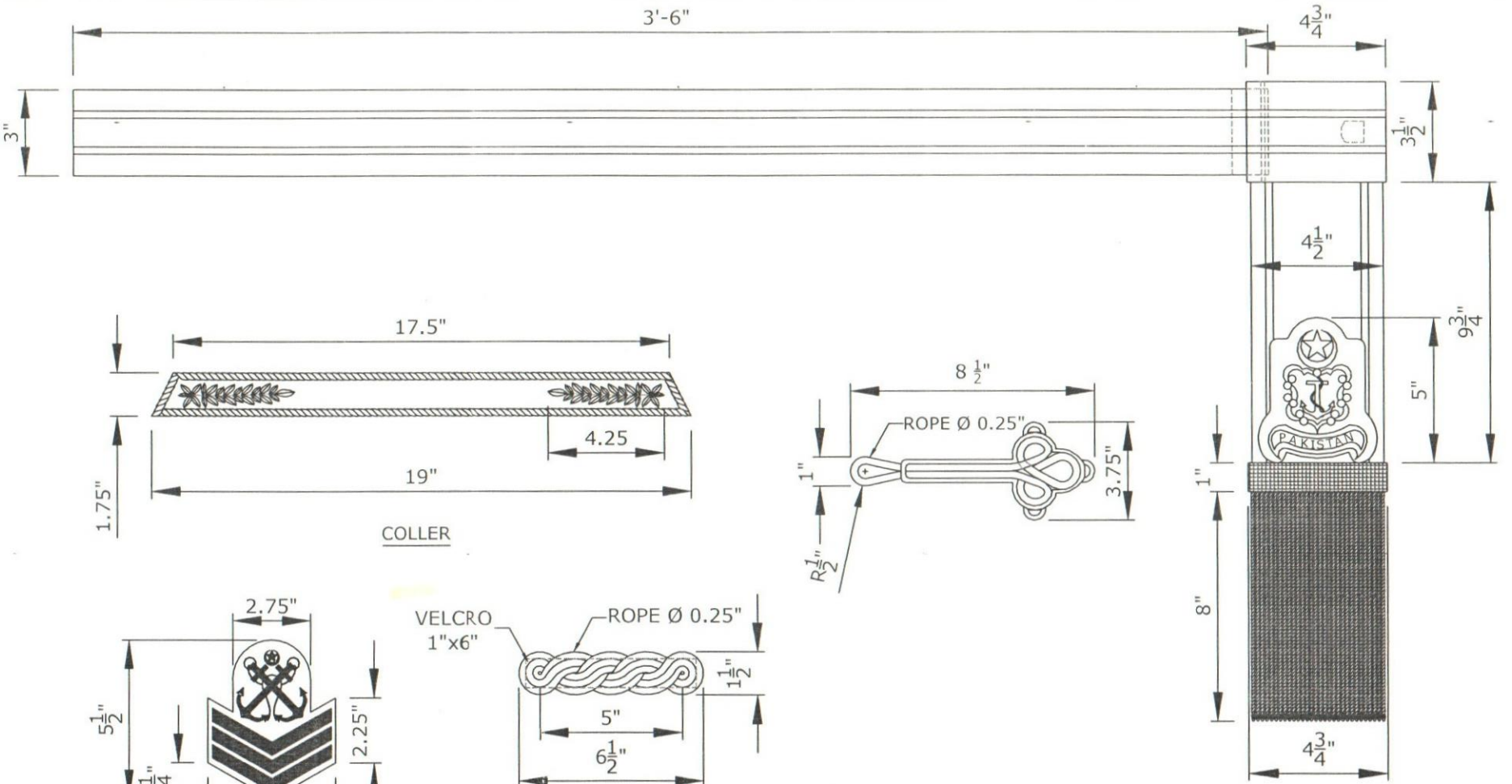


FRONT VIEW

1401

DITD KARACHI		
TITLE: BAND DRESS COAT (MAIN BODY)		
DWG.NO. TD-2593/2021	DIMENSIONS: INCHES	
DATE: 08-09-2021	SCALE: N.T.S	
DRAWN BY	CHECKED BY	APPROVED BY
xxxxsdxxxx	xxxxsdxxxx	xxxxsdxxxx
ADNAN NISAR D/MAN	LT SANA KANWAL SO.R&D	LT,CDR M.SHAHZAD DD ID

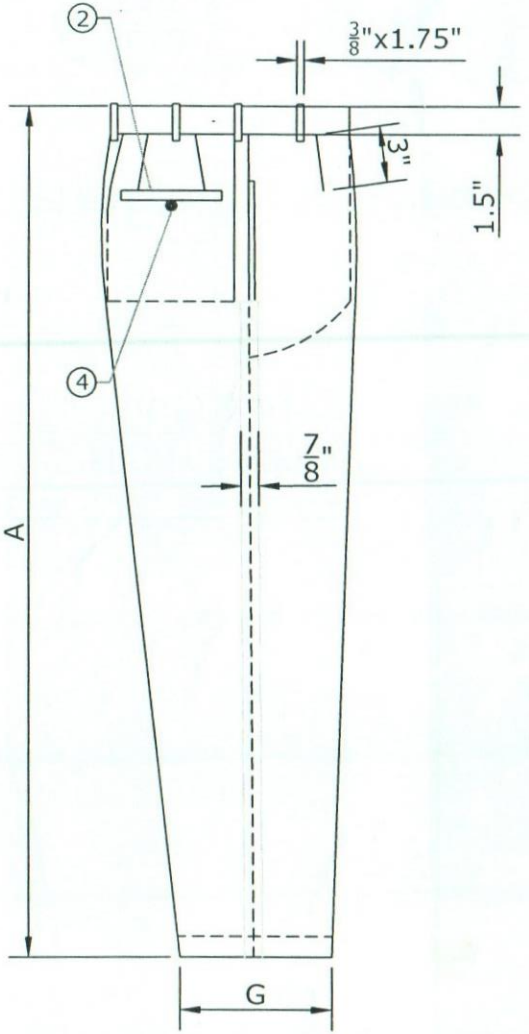
NOTE:
FOR FURTHER DETAILS SEE SEALED STOCK SAMPLE.



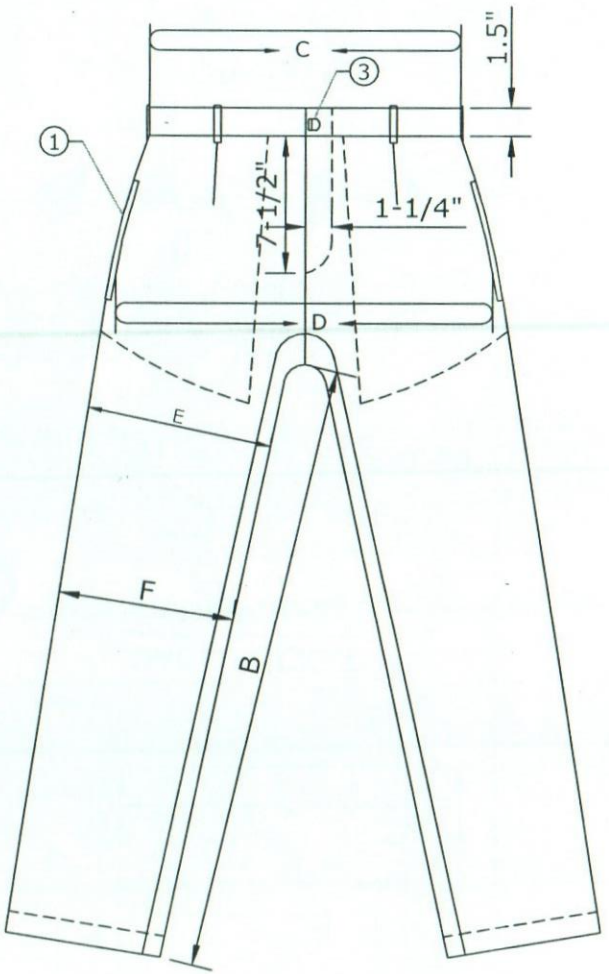
1402

NOTE:
FOR FURTHER DETAILS SEE APPROVED STOCK SAMPLE.

DITD KARACHI		
TITLE: BAND DRESS COAT (SMALL PARTS)		
DWG.NO. TD-2594/2021	DIMENSIONS: INCHES	
DATE: 10-09-2021	SCALE: N.T.S	
DRAWN BY	CHECKED BY	APPROVED BY
xxxsdxxx	xxxsdxxx	xxxsdxxx
ADNAN NISAR D/MAN	LT SANA KANWAL SO.R&D	LT,CDR M.SHAHZAD DD ID



SIDE



FRONT

1403

G	BOTTOM	18
F	KNEE	20
E	THIGH	25
D	HIP	30
C	WAIST	34
B	SEAM	28
A	LENGTH	40

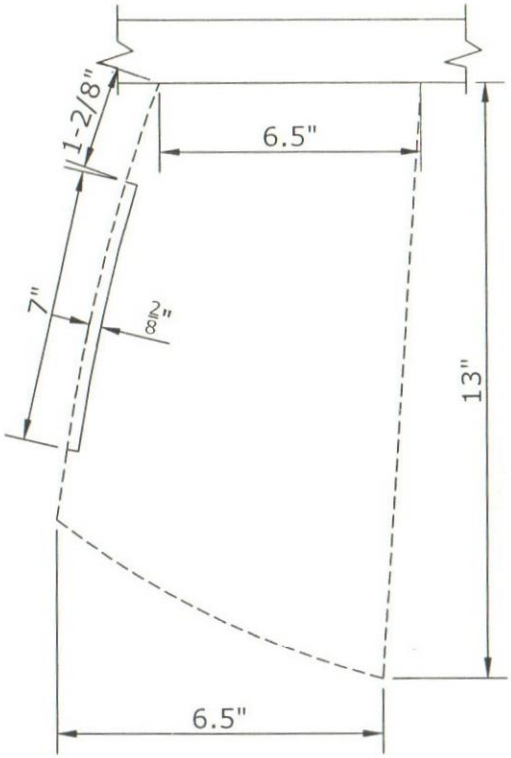
NOTE:
FOR FURTHER DETAILS SEE SEALED STOCK/APPROVED SAMPLE.

DITD KARACHI

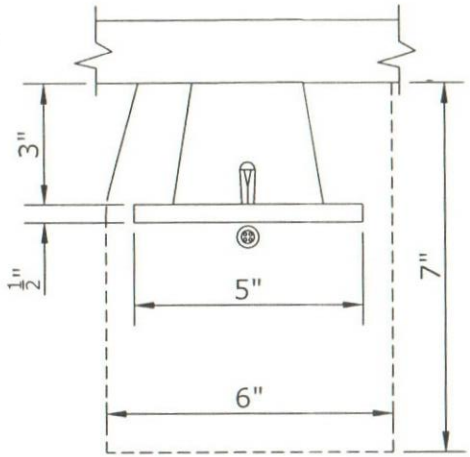
TITLE: BAND DRESS TROUSER (MAIN BODY)

DWG.NO. TD-2595/2021	DIMENSIONS: INCHES
DATE: 08-09-2021	SCALE: N.T.S

DRAWN BY	CHECKED BY	APPROVED BY
xxxxsdxxxx	xxxxsdxxxx	xxxxsdxxxx
H.D/M	LT	LT,CDR
M.ASGHAR I/c DWG.	SANA KANWAL SO.R&D	M.SHAHZAD DD ID

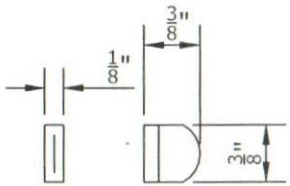


FRONT POCKET
DETAIL-1

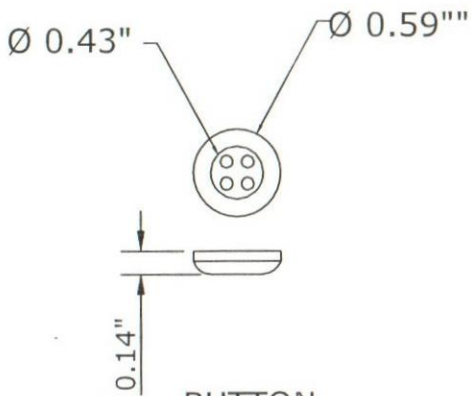


BACK POCKET
DETAIL-2

1404



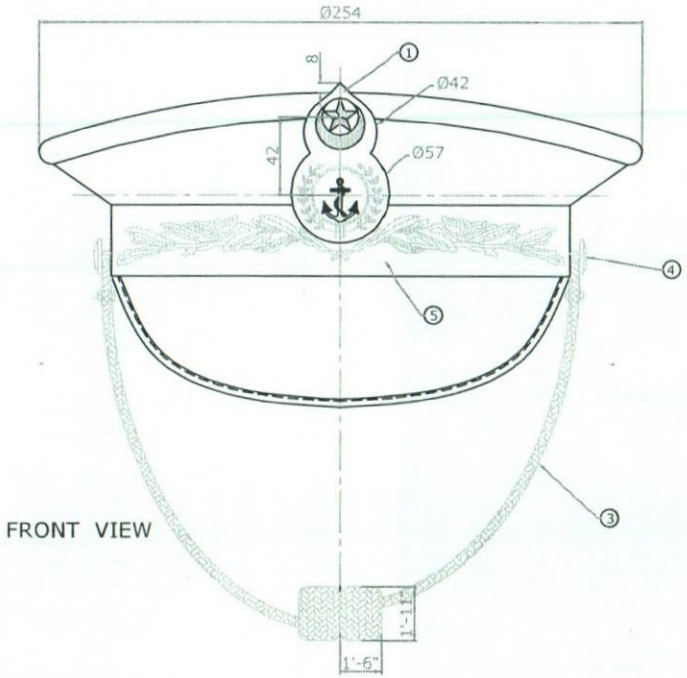
HOOK
DETAIL-3



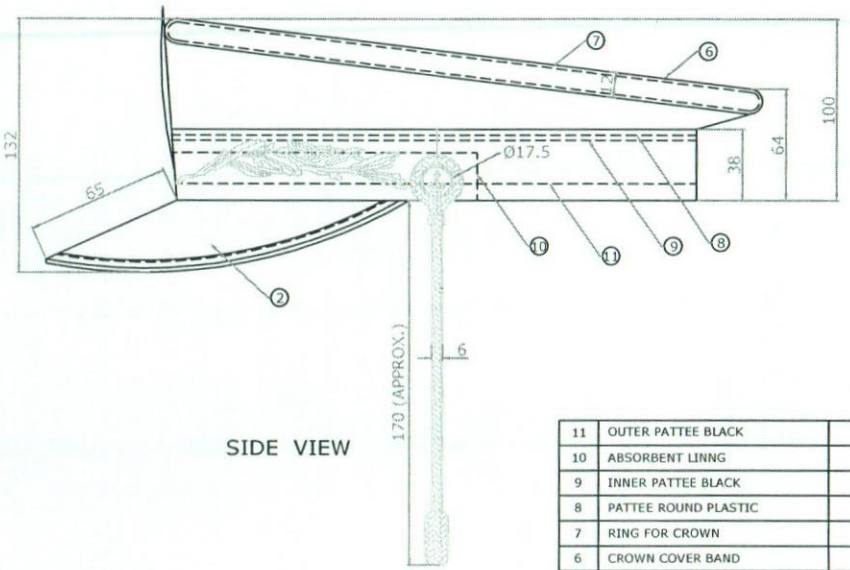
BUTTON
DETAIL-4

NOTE:
FOR FURTHER DETAILS SEE SEALED STOCK/APPROVED SAMPLE.

DITD KARACHI		
TITLE: BAND DRESS TROUSER (SMALL PARTS)		
DWG.NO. TD-2596/2021	DIMENSIONS: INCHES	
DATE: 10-09-2021	SCALE: N.T.S	
DRAWN BY	CHECKED BY	APPROVED BY
xxxxsdxxxx	xxxxsdxxxx	xxxxsdxxxx
H.D/M M.ASGHAR I/c DWG.	LT SANA KANWAL SO.R&D	LT,CDR M.SHAHZAD DD ID



FRONT VIEW



SIDE VIEW

S.NO	ITEM	MATERIAL
11	OUTER PATTEE BLACK	
10	ABSORBENT LINNG	
9	INNER PATTEE BLACK	
8	PATTEE ROUND PLASTIC	
7	RING FOR CROWN	
6	CROWN COVER BAND	
5	MOHAR BAND	
4	CHIN SECURING BUTTON	
3	CHIN STRAP	
2	PEAK	
1	BADGE	

1413

DITD KARACHI

TITLE: PEAK CAP BAND DRESS

DWG.NO. TD-2605/2021	DIMENSIONS: mm
DATE: 07-10-2021	SCALE: NTS

DRAWN BY	CHECKED BY	APPROVED BY
xxxsdxxx	xxxsdxxx	xxxsdxxx
HDM M. ASGHAR I/c DWG.	LT SANA KANWAL SO, TEXTILE	LT CDR M. SHAZAD DITD

NOTE:
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

ANNEX D TO
PN SPECIFICATION NO 14/2021
PROMULGATION DATE 28 OCT 21

COMMON DEFECTS IN FABRIC (ASTM D-3990)

S.No	Defects	Definition
		FABRIC
a.	**Abrasion Mark (bruise, Chafe Mark or rub)**	An area of fabric damaged by friction Damaged due to a braded or uneven surface in a machine.
b.	**Baggy or wavy cloth**	Cloth that will not lie flat on a Cutting Table Tight or loose yarn either in warp or filling (weft).
c.	**Barré Mark**	An unintentional, repetitive visual pattern of continuous bars and stripes usually parallel to the filling of woven fabric. Barré can be caused by physical, optical, or dye differences in the yarns, geometric differences in the fabric structure, or by any combination of these differences.
d.	**Blotch**	An off colored area of any shape caused by grease or Oil. (Syn. oil spot). Cause due to leakage/ slippage from machine.
e.	**Bow**	A fabric condition resulting when filling yarns are displaced from a line perpendicular to the selvages and form one or more arcs across the width of fabric.
f.	**Broken filament**	In multifilament yarn, breaks in one or more filaments.
g.	**Clip mark**	An open place causing a streak of variable length approximately parallel of the length of width.
h.	**Decanting Mark**	A crease marks or impression extending across the cloth near the beginning or end of a piece due to the thickness of the fabric leader seam.
j.	**Double Pick**	In woven fabrics, two picks wrongly place in the same place.
k.	**Draw Back**	A weave distortion characterized by tight and stack places in the same warp yarn.
l.	**End out**	A void caused by a missing warp yarn.
m.	**Float**	In woven fabrics, the portion of a warp or filling yarn that extends unbound over two or more warp of filling yarns.
n.	**Filling Band**	In woven fabrics, visual defect across the width due to a change occurring in the yarn for a large number of picks.
p.	**Frosting**	A change in color in a limited area of fabric cause by abrasive wear.
q.	**Hole**	In fabric, imperfection, wear one or more yarn or sufficiently damaged to create an aperture.
r.	**Fuzzy**	Characterized by a hair appearance due to protruding broken fibers or filaments.
s.	**Let-off Mark**	In woven fabrics, a corrugated defect pattern distributed across the fabric width.
t.	**Loom fly**	Waste fibers create during weaving that are woven into a fabric.

u.	**Loop Salvage**	An improperly woven salvage of uneven width or a salvage containing irregular filling loops extending beyond the outside edges.
v.	**Messiness**	Surface distortion in a fabric characterized by objectionable unevenness due to many minor deformations.
w.	**Pin Hole**	In fabric, a very small hole, approximately the size of the a cross section of the pin.
x.	**Pin Mark**	A series of holes near the edge parallel with the lengthwise direction of a fabric caused by the holding device on the pin tender frame.
y.	**Reed Mark**	In woven fabric, a creak between groups of ends, either continues or at intervals.
z.	**Scalloped Salvage**	An abrupt, narrow indentation in the salvage.
aa.	**Salvage Mark**	In finished cloth, a lengthwise crease mark along the salvage caused by an edge being folded or doubled.
ab.	**Shiner**	A streak, usually short, caused of a lustrous section of filament yarn.
ac.	**Smash**	In woven fabrics, relatively large hole characterized by broken warn ends and floating picks.
ad.	**Skew**	A fabric condition resulting when filling yarns are angularly displace from a line perpendicular to the edge or side of the fabric.
ae.	**Snag**	In fabrics, a yarn or part of a yarn pulled or plucked from the surface.
af.	**Thin Place**	In fabric, appearance characterized by a small area of loosely placed yarn or by a congregation of thin yarn as compared to the adjacent construction.
ag.	**Tight Salvage**	In woven fabrics, salvage yarn shorter than warp yarn in the body of the fabric.
ah.	**Streak**	An extended unintentionally strips narrow width, often a single yarn.
aj.	**Tram Mage**	In woven crepes, a puckered area in which a filling yarn has twist running in the same direction for several picks instead of alternating S and Z twist.
ak.	**Temple Mark**	In woven fabrics, small holes or distortions adjacent to the salvage.
al.	**Tender Mark**	A visible deformation on the side edge or body of a fabric due to pressure for clips or pins.

ANNEX E TO
PN SPECIFICATION NO 14/2021
PROMULGATION DATE 28 OCT 21

GUIDE LINE FOR FABRIC INSPECTION

1. **Fabric Inspection.** Fabric inspection is usually done on fabric inspection machines. These machines are designed so that rolls of fabric can be mounted behind the inspection table under adequate light and rerolled as they leave the table. Defects in a fabric can be seen readily with these machines, as the inspector has a very good view of the fabric and the fabric does not need to be reversed to detect defects. There are various fabric inspection systems:

   a. 4-Point system (Usually recommended by International firm).

   b. 10-Point system

2. **4-Point System** The 4-point system, also called the American Apparel Manufacturers Association (AAMA) point-grading system for determining fabric quality, is widely used by producers/ manufacturers of apparel fabrics and by the Department of Defense in the United States and is endorsed by the AAMA.

   a. Criteria of giving penalty points based on defects and defect length. Penalty points are assessed to a piece of fabric according to the length of defects measured in inches.

   b. Each roll in the sample shall be examined on face side only. When the total yardage in the roll does not exceed 120±0.5 meters (≈130± 0.5 yards). Entire meters/ yardage in the roll shall be examined. When the total meters/ yardage exceeds 120 meters ± 0.5 M (130± 0.5 yards) only determined meters shall be examined. All the defects are define in ASTM D-3990, which are clearly noticeable at normal inspection distance 0.91 M (03 feet) shall be scored against demerits points. Clearly visible knots shall be marked as demerit points. No linear yard (increments of 01 yards (0.91m) on the measuring device of inspection machines) from any one roll with in the sample shall be penalized more than 04 points. The sample size shall be 20 rolls selected from offered quantity. The lot shall be categorized, if the points per 100 square yards (83.6$m^{2)}$, if the total yardage examined exceeds 25 points. The lot shall be categorized if the points per 100 square yards (83.6 m^2) of two or more individual's rolls exceeds 38 points. If one roll exceeds the point level per 100 square yards (83.6m^2) a second sample of 20 rolls shall be examined only for individual roll quality examination. The lot shall be categorized if one or more rolls in the second sample exceeds 38 points per 100 square yards (83.6m^2). Point computation for lot quality and individual roll quality shall be as follows:

Point Values For Fabric Defects (4-Point System) Criteria Of Giving Penalty	
Length of fabric to be Inspected	**Points Allotted**
(1) Length of defect in fabric, either length or width	
(a) Upto 03 inches(7.6 cm) or less in any direction	1

	(b) Over 03 inches (7.6cm) up to 06inches (15.2cm)	2
	(c) Over 06 inches (15.2cm) up to 09 inches (22.9cm)	3
	(d) Over 9 inches (22.9 cm)	4
(2)	Holes and openings (largest dimension)	
	(a) 01 inch (2.54cm) or less	2
	(b) Over 1 in	4
(3)	Baggy, ridgy, wavy cloth	4
(4)	Width less than specified	4
(5)	Characteristic of finish hand and shade not equal to standard sample	4
(6)	Non uniformity of shade (molted. Streaky or cloudy)	4
(7)	Holes, cuts, tears, open places	4

c. **Calculation:** Total defect points per 100 yd^2 (83.6m^2) are calculated, and normally those fabric rolls containing more than 40points/100yd^2 (83.6m^2) are considered "second." **e.g.** A fabric roll 120 yard long and 48 inch wide contains, the following defects:

2 defects up to 3 inch.	2 x 1= 2 points
5 defects over 3 inch. but less than 6 in	5 x 2= 10 points
1 defect over 6 inch. but less than 9in.	1 x 3= 3 points
1 defect over 9 inch.	1 x 4= 4 points
Total defect points	19

Therefore,

Points/100yd^2 (83.6m^2) =

$$\frac{\text{Total points scored in the roll x 3600}}{\text{Contracted width of Fabric (inches or meters) x Total yards inspected}}$$

$$= 19 \times 3600 / 48 \times 120$$

$$= 11.9 \text{ defect points/ } 100\ yd^2$$

So if the acceptance criteria are 40 points/100yd^2, then this roll is acceptable.

3. **Examination of Length**.

a. Individual rolls. During the examination, each roll in the sample shall be examined for length. Any length found to be less than the minimum specified or more than 2 yards (1.82m) less than the length marked on ticket shall be considered a defect with respect to length. The lot shall be categorized if two or more rolls in the sample are defective with respect to length.

b. Total Yardage in sample. The lot shall be categorized, if the total of the actual lengths of rolls in the sample is less than the total of the lengths marked on the tickets. The rolls examined shall be those selected for the examination of individual rolls.

c. Examination for Shade Variation. During the examination, each roll in the sample shall be examined for shade variation. Any role in the sample exhibiting uneven shade, shade variation side to side, side to center, or end to end, shall be cause for rejection of the entire lot represented by the sample.

d. Examination for Shade match and finish, individual rolls. Each roll in the lot shall be examined visually for shade match and finish. A roll shall be unacceptable if it fails to meet the requirements for shade match or finish. The sample unit shall be a 4 inch by 20 inch (10.2 by 50.8cm) swatch of the cloth. A sample unit shall be drawn from each roll in the lot.

e. Examination for face identification and non-conformance with the Textile fiber products Identification Act. During the examination, each roll in the sample shall be examined for these defects. The lot shall be categorized if two or more rolls in the sample have face identification missing from either or both ends, or are not labeled or ticketed.

ANNEX F TO
PN SPECIFICATION NO 14/2021
PROMULGATION DATE 28 OCT 21

FEED BACK FORM

Unit Name: _____

Item Description#: _____

Issue/Problem occurred: _____

PN SPEC #: _____

Possibility to resolve Issue: _____
_____
_____

Any Other Remarks: _____
_____

Note:

- It's good to give feedback for improvement in any clothing Item.
- Recurring problem will also be intimated through this form.

Name Stamp

COUNTERSIGNED By CO/Admin Authority
Name Stamp

Blank Page