



PAKISTAN NAVY SPECIFICATION 01/2018

PROMULGATION DATE: 26 Mar 2018

Amendment in PN Specification 01/2018 dated 26 March 2018
vide DID letter No. PN/DID/03/5598116 dated 23 June 2020

For: Dress 4B

Read: Dress 4

GENERAL SERVICE DIGITAL
CAMOUFLAGE
DRESS NO 4 (AFLOAT) 100%
COTTON

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AMENDMENT RECORD

Amd No	Date	Text Effected	Signature and Date

REVISION NOTE

The specification has been prepared to bring the test methods and procedures into 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 J. 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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1. DESIGNATION

General Service Digital Camouflage (GSDC) Dress No. 4 (Afloat) 100 % Cotton (Bush Jacket, Trouser, PAK NAVY soft tally and Camouflage Jockey Cap)

2. USAGE

2.1 This dress will be used by Officers, CPOs and Sailors of Pakistan Navy on afloat vide NHQ letter PN/NS Dte/03/878204 dated 30 Nov 17.

3. INTRODUCTION

Read: PN/DID/03/13316519 dated 23 May 2022.

3.1. This specification is prepared by Directorate of Indigenous Technical Development, 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 Directorate. However, it cannot be implemented without prior approval of DITD. This specification supersedes and replaces PN Specifications No. 03/2017.

3.2 This specification booklet includes 09 Annexes, and consists 33 pages, including the cover.

4. SCOPE

4.1 This specification covers the manufacturing / inspection requirements of cloth made from cotton to be used in the manufacturing of uniform, namely General Service Digital Camouflage (GSDC) Dress No. 4 (Afloat) 100 % Cotton (Bush Jacket & Trouser) to be used by personnel of Pakistan Navy. This specification lays down the standard to which the stores shown under designation above should conform. It defines and lays down the quality, standard and details of materials, workmanship and finish. It also lays down the details of sampling, testing, inspection rejection, marking, preservation, packing and delivery etc.

4.2 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.

5. RELATED DOCUMENTS

5.1 The standards and documents that have been referred to in this specification are:

- | | |
|----------------------|---|
| a. ISO 1833 | Textile – Quantitative chemical analysis |
| b. ISO-3801 | Determination of mass per unit length and area |
| c. ISO-7211/2 | Determination of number of threads per unit length |
| d. ISO-7211/5 | Determination of linear density of yarn removed from fabric |
| e. ISO-105-C03 | Colour fastness to Washing test No. 3 |
| f. ISO-105-E02 | Colour fastness to Seawater test |
| g. ISO-105-X12 | Colour fastness to Rubbing test |
| h. ISO-105-E04 | Colour fastness to Perspiration |
| j. ISO 13934-01 1999 | Textile- Tensile properties of fabrics (strip method) |
| k. ISO 13937-01 1999 | Textile- Tear properties of fabric (Elmendorf) |
| m. AATCC 128-2009 | Wrinkle Recovery of fabric |
| n. AATCC 79-2010 | Absorbency of Textiles |
| o. ISO 9237:1995 | Determination of permeability of fabric to air |
| p. AATCC 195:2010 | Test for evaluation of Moisture Management |
| q. ASTM D 1230 | Flammability of Apparels |

r.	ISO 6330 (3A)	Domestic washing and drying procedures for textile testing
s.	BS EN ISO 12945-2	Determination of fabric propensity to surface fuzzing and to pilling
t.	BS EN ISO 12947-4	Determination of the abrasion resistance of fabrics by the Martindale method
u.	BS EN 25077	Determination of Dimensional Change in washing and drying
v.	ISO 3071	Determination of pH of aqueous extract
w.	AATCC 16 option 3	Colorfastness to light
x.	BS 4162	Methods of test for buttons
y.	AATCC 133	Colorfastness to hot press
z.	ASTM D 5171	Standard test method for impact resistance of plastic sew through buttons
a1.	ASTM D5169	Dynamic shear strength of hook and loops touch fastener (Velcro)
a2.	ASTM D 5170	T Peel Strength of hook and loop touch fastener (Velcro)

6. TERMS & DEFINITIONS

6.1 Definitions for the terms used in this standard are given at Annex G.

7. TECHNICAL DETAILS FOR GENERAL SERVICE DIGITAL CAMOUFLAGE (GSDC) DRESS NO. 4 (AFLOAT) 100 % COTTON

7.1 The technical details of General Service Digital Camouflage (GSDC) Dress No. 4 (Affloat) 100 % Cotton is given at Annex A of this specification.

8. MANUFACTURING DETAILS FOR GENERAL SERVICE DIGITAL CAMOUFLAGE (GSDC) DRESS NO. 4 (AFLOAT) 100 % COTTON

8.1 Manufacturing details of General Service Digital Camouflage (GSDC) Dress No. 4 (Affloat) 100 % cotton will be as per Annex B of this specification.

9. QUALITY OF WORKMANSHIP AND FINISHING

9.1 Workmanship and finish of the General Service Digital Camouflage (GSDC) Dress No. 4 shall be equal to the sealed sample. It shall be best of its class and to the entire satisfaction of the inspector.

10. TESTING

10.1 The material shall be subjected to tests laid down in this specification at Annex A of this specification and related documents. At least one complete dress and 03 meter fabric will be required to complete all the tests mentioned at Annex A 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 A may also be conducted in order to check its suitability.

11. TENDER SAMPLE

Amendment: Vide DNS Letter PN/NS Dte/03/3377058 dated 09 December 2021			
Spec No.	Clause	Page No.	Description
01/2018	11.1	5	Tender Sample to be approved by TSR Committee

11.2 For each contract following tendering.

- | | | | |
|----|------------------|---|----------|
| a. | Finished Garment | - | 03 Nos. |
| b. | Fabric | - | 05 Meter |

c.	Fused Buckram	-	01 Meter
d.	Buttons	-	05 Nos.
e.	Stitching Thread	-	50 Grams
f.	Velcro	-	0.5 meter
g.	Waist adjustment Tape	-	02 No.s

12. ADVANCE SAMPLE

12.1 Advance sample or pre-production sample, when required, shall be submitted in accordance with terms of the contract for inspection, testing and approval by CINS. The minimum quantities required are 05 dresses along with samples of materials used in manufacturing of garments for inspection.

12.2 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 or ten dresses, whichever are more along with samples of materials for inspection.

12.3 The approval of the sample mentioned in Para 11 & 12 authorizes the commencement of bulk production but does not relieve the suppliers/ manufacturers from compliance with all the provisions of this specification. One approved sample 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.

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

12.5 Firm shall provide advance sample along with quality verification reports of fabric from an accredited laboratory to ensure in process inspection/ quality procedure of the firm.

13. INSPECTION

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

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

13.3 Inspection of Store 100% of the offered store shall be inspected. The guide lines for such examination/inspection are listed at Annex H. Stage inspection of Dresses be carried out as deemed appropriate.

13.4 Inspection/ Acceptance and Rejection of Stores Inspection/ acceptance is to be carried out to the satisfaction of Chief Inspector Naval Stores.

13.5. The dresses shall be examined for the correctness of material, shape, design, dimension, size, workmanship and finish.

13.6. All dresses shall be inspected w.r.t defective shape, discoloration/ fading, pinholes, closing of dresses are to be especially checked.

13.7. 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 to this specification.

13.8. 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.

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

13.10. Dresses with major defects as described in Annex H of this specification will be rejected.

13.11. **Responsibility for Inspection** The supplier is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. PN reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

13.12 **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).

13.13 **Replacement by the Contractor** The supplier/ manufacturer is responsible for replacement of the consignment or any part thereof whenever it is found to be not conforming to this specification. The supplies so tendered in replacement, shall be subjected to testing/Inspection and acceptance by the Inspecting Officer.

13.14 **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. **STAMPING OF ACCEPTED/ REJECTED STORES BY THE INSPECTOR** Following instructions are to be followed:

14.1 **Stamping of Accepted Stores** Each acceptable Dress shall be stamped with Inspector's Individual Acceptance Mark. The stamping shall be legible.

14.2 **Stamping of Rejected Stores** The rejected Dress shall be marked with Inspector's Rejection Mark to avoid re-submission by the supplier.

14.3 The Inspector is the authority in all matters pertaining to inspection.

15. **SPECIAL INSTRUCTIONS**

15.1 **CARE INSTRUCTIONS** Care instructions in English and Urdu shall be attached with each Dress as indicated in the drawing and have minimum requirement as follows:

- Washing procedure.
- Drying procedure.
- Any Prohibition.

16. **PACKING DETAILS** The store when ordered to be delivered 'PACKED' shall be packed as per following instructions:

- The Dresses shall be packed in a neat, dry and clean condition in standard polyethylene.
- 10 Dresses shall be further packed in a thick Boxboard.
- Each Box Board Packing shall be securely and properly packed.
- Each box board shall consist of same size.

*Amendment: PN/DID/GENERAL/195858
DT: 02-8-24*

FABRIC PACKING DETAILS

- Accepted fabric shall be packed in the form of rolls.
- Each roll shall have length from 100 yards up to 200 yards (within multiple of 4 yds).
- The rolls should be packed/ wrapped in polyethylene sheet, vacuumed and in sealed packing.
- Each roll shall bear identification label indicating description of store, year of manufacture and contract no, material composition, fabric width and length, contractors name, batch no, shrinkage.

JOCKEY CAP PACKING DETAILS

- 10 x Camouflage Jockey/ Sea Caps bundles shall be packed in a neat and tidy condition in standard polyethylene packing of 0.035 mm thickness. These bags/ bundles shall be sealed with transparent adhesive tape 2.54 cm of thickness 0.04 – 0.05 mm.
- 05 X such bundles (50 caps) shall be packed in carton Corrugated Card board box (07 ply).
- Each Carton shall contain one size of Camouflage Sea Caps only.
- Each box Board Packing shall be securely and properly packed with transparent adhesive tape 10 cm of thickness 0.04 – 0.05 mm.

16 AMENDED VIDE DITD LETTER NO. PN/DGITD/03/1463776 DATED 21 DECEMBER 2018.

17. **IDENTIFICATION LABEL** Each Dress shall bear following minimum information mentioned on identification label, attached as indicated in the drawing:

- a. Item name/ item description with NSN/Pattern No.
- b. Material Composition and size
- c. Contract number and Date
- d. Year of manufacture
- e. Contractor's name, initials, or trade mark
- f. Batch no.

*Amendment: PN/DID/GENERAL/1958588
DT: 02-8-24*

18. **PACKING LIST** Firm is bound to provide a packing list of store offered for inspection alongwith the challan, which include complete details about the store i.e Pattern No., Designation, quality packed, size, quantity, contract No., and Date, Challan No. and Date. A Packing list shall be enclosed after completion of inspection with each packed box giving full details about the stores packed i.e. Pattern No., Designation, quality packed. Size, quantity, contract No., and Date, I/Note No. or voucher No. and date, consignee, consignor, Date of packing and packer's signature.

19. **MARKING OF STORES** 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
 - (4) Catalogue No and Designation of the store packed.
 - (5) Contract No and Date.
 - (6) Quantity of the items packed.
- b. On Back
 - (5) Consignee address.
 - (6) Designation i.e. Railway Station.
 - (7) Weight of the Package.
 - (8) The No. of individual Package and the total No of Packages in the consignment joined by the Word 'of' e.g. 2 of 300.
- c. On Bottom
 - (4) Consignor's Name.
 - (5) Voucher No. or inspection Note no. and date.
 - (6) Month and year of packing.

DELIVERY

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

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

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

XXXXSDXXX
AZHAR MIR
Commander Pakistan Navy
Director

Annexes:

- A. Technical details for General Service Digital Camouflage (GSDC) Dress No. 4 (Afloat)
100 % Cotton
- B. Manufacturing details for General Service Digital Camouflage (GSDC) Dress No. 4 (Afloat) 100 % Cotton
- C. Technical details of PAK Navy Soft Tally
- D. Manufacturing details of Pak Navy Soft Tally
- E. Technical details of Camouflage Jockey Cap / Sea Cap
- F. Manufacturing details of Camouflage Jockey Cap / Sea Cap
- G. Terms & Definitions
- H. Guidelines for Inspection – Specific Parts Defects
- J. Feedback Form

Distribution:

DP (N)

CINS

DNS

CO PNCSD

ANNEX A TOPN SPECIFICATION NO 01/2018PROMULGATION DATE 26 Mar 2018

TECHNICAL DETAILS FOR GENERAL SERVICE DIGITAL CAMOUFLAGE (GSDC) DRESS
NO. 4. (AFLOAT) 100% COTTON

S NO	ITEM	REQUIREMENT		
BASE FABRIC MATERIAL SPECIFICATION (RIBBED CAMOUFLAGE CLOTH)				
1.	Material	100% Cotton		
2.	Count of Yarn	Warp	20 ^{s+} 2	(29.5 ± 2 Tex)
		Weft	16 ^{s+} 2	(37 ± 2 Tex)
		Ring spun Combed yarn shall be used		
3.	Threads per Inch	Warp	123 ± 5	(Ends)
		Weft	63 ± 5	(Picks)

Read: Amendment in PN Spec 01/2018 vide DID letter PN/DID/03/12913337 DT: 28-03-22

S NO.	ITEM	REQUIREMENT		
BASE FABRIC MATERIAL SPECIFICATION (RIBBED CAMOUFLAGE CLOTH)				
a.	Color Shade	Panton Shade	OR	L a b Values
	Black	19-1101 TCX	30.96	2.44 0.82
	Dark Grey	18-4006 TCX	49.64	0.26 0.75
	Medium Grey	17-4405 TCX	54.41	-0.17 0.28
	Light Grey	15-4003 TCX	65.30	-0.31 2.28
	Grey	16-4702 TCX	72.92	-1.23 3.12
	Pastel Grey	13-4303 TCX	77.34	-0.64 3.25
b.	Color Difference	(ΔE ≤ 1)		

5.	Weave Pattern	Twill weave 2/1 + Rip Stop				
6.	Threads /Rip	Warp	2 each single			
		Weft	2 each single			
7.	Size of Rip	Warp	6mm±1mm			
		Weft	6mm±1mm			
8.	Weight (gm/sq.mtr)	245 gm ± 2%				
9.	Finish	Mercerize, pre- shrink by sanforize and hydrophilic softener (nano finish)				
10.	Finish width	59"				
11.	Nature of Dye	Ground Print	Vat dye Vat print			
12.	Digital Camouflage Design Pattern	As per Appendix I and approved sample held with CINS				

BASE FABRIC PERFORMANCE TESTING

1.	Color fastness to washing a. Change in Shade b. Staining	GS: 4 or better GS: 4 or better
2.	Color Fastness to Rubbing (Dry) Staining	GS: 4 or better
3.	Color Fastness to Rubbing (Wet) Staining	For: GS: 3 or better Read: GS: 4 or better DITD letter PN/DGITD/03/1086039 dt. 12-04-18.
4.	Color Fastness to light Change in Shade	GS: 4 or better
5.	Color Fastness to perspiration a. Change in Shade b. Staining	GS: 4 or better GS: 4 or better

6.	Color Fastness to Sea Water a. Change in Shade b. Staining	Warp Weft	GS: 4 or better GS: 4 or better
7.	Tensile strength (N)	Warp Weft	1000 ± 5% Ref: PN/DID/03/9509258 dated 16 June 2021 750 ± 5% Amendment Read
8.	Tear Strength(N)	Warp Weft	35 ± 5% Ref: PN/DID/03/9509258 dated 16 June 2021 44 ± 5% Amendment Read
9.	Flammability		Class1 Flame spread time ≥ 3.5 sec
10.	Dimensional Stability test after 3 HL 40°C Warp Weft		±2% ±2%
11.	Wrinkle recovery		Minimum 2
12.	Crease recovery		150° ± 3%
13.	Appearance after 5-10 washes (3A) with tumble dry		Satisfactory
14.	Pilling resistance after 5,000 cycles		For: Grade 4 Read: Grade 5 DITD letter PN/DGITD/03/1086039 dt. 12-04-18.
15.	Abrasion resistance after 6,000 cycles		No thread break
16.	Air permeability(mm/sec at 100 Pa)		Minimum 45
17.	Moisture Management		0.65 Min
18.	Water absorbency (drop test)		Front side 7 sec(max) Back side 6 sec (max)
19.	pH level		6-8

STITCHING THREAD SPECIFICATION

1.	Material	Polyester
2.	Construction	2 cord each single
3.	Count of yarn	2/31.5 Tex ± 3%
4.	Breaking Strength (24")	2.23 Kg ± 250 gms
5.	Shade	Light grey or Pantone 15-4003 TCX
6.	Color fastness to washing (Test No. 3) a. Change in Shade b. Staining	GS: 4 GS: 4

VELCRO TAPE MATERIAL SPECIFICATION

1.	Material Male Female	Nylon Nylon
2.	Colour	Light grey or Pantone 15-4003 TCX

VELCRO TAPE PERFORMANCE TESTING

1.	1. Before sticking / unsticking 300 times at 300 g. 2. After sticking / unsticking 300 times at 300g.	Satisfactory Satisfactory
2.	Peel Strength (lbs per in width)	1.5
3.	Shear strength(PSI)	10

WAIST ADJUSTMENT TAPE

1	Material	100% Cotton
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2.	Color	Light grey or Pantone 15-4003 TCX
<u>BUTTONS</u>		
1.	Material	Plastic
2.	Color	Black Pantone # 19-4006 TCX
<u>BUTTON PREFORMANCE TESTING</u>		
1.	Color fastness to water	GS 4 or better
2.	Pull test at 90 N	No crack, chips or breakage No structural failure No center break out
3.	Impact resistance	No crack, chips or breakage
4.	Color fastness to heat (hot pressing)	GS 4
5.	Appearance after washing	No color transfer on fabric

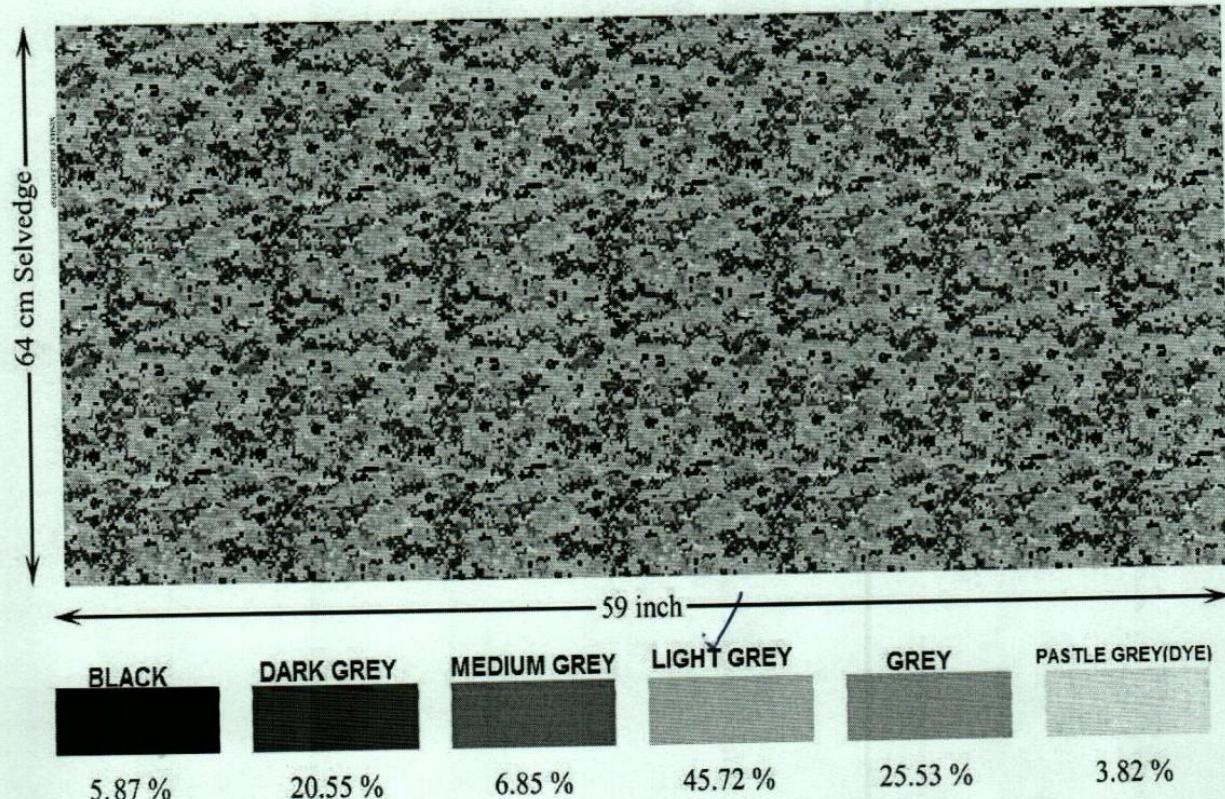
Appendix:

I. DIGITAL CAMOUFLAGE DESIGN/ PATTERN OF DRESS NO. 4

APPENDIX I TO ANNEX A TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018

DIGITAL CAMOUFLAGE DESIGN/ PATTERN OF DRESS NO. 4

4B Pixilated Camo



ANNEX B TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018

MANUFACTURING DETAILS OF GENERAL SERVICE DIGITAL CAMOUFLAGE (GSDC)
DRESS NO. 4 (AFLOAT) 100% COTTON

1. GSDC Dress No. 4 (Afloat) 100 % cotton is to be manufactured as per measurement schedule and drawing at Appendix I and Appendix II respectively.
2. 'PAK NAVY' soft tally as per Annex C and D of this specification shall be attached above left chest pocket of Dress No. 4. Jockey /Sea Cap shall be supplied as per Annex E and F.
3. The sewing/stitching thread should match with the base fabric colour i.e light grey or Pantone 15-4003 TCX and spun polyester.
4. In Bush jacket metallic air vents are placed at arm pits both side front and back and two in upper and lower side of each back pleat. Outer dia is 11mm and inner dia is 4.5 mm. Shade of metallic brass air vent should match with the base fabric color i.e. light grey or Pantone 15-4003 TCX.
5. Polyester Buttons used should be Mat finished, 4 holes with 19 mm dia (30) ligne with 4 mm thickness and black in colour. Buttons of 16 mm dia with 4 mm thickness shall be used on shoulders only. The button is to be fastened with same matching black colour thread with cross sewing neatly.
6. On bush jacket collar ends, pockets and flaps, front placket, sleeves loops and back pleats are to be reinforced with bartack.
7. In Bush jacket on back pleats, joint of front and back panels, sleeves, arm joint, shoulder, cuffs and elbow patch double needle stitching is required.
8. Bush jacket shall be 1" bottom hemmed.
9. Soft paper fusing shall be used in collar, front pocket flaps and shoulder flaps.
10. Buttonholes are to have at least 22 stitches per 2 cm and to be bar-tacked or taper barred.
11. In trouser fly, cross pockets, knee and seat patches, thigh pockets, and side and seat seam are to be double needle stitched.
12. On trouser on front cross pockets end, thigh pockets, pockets bag and its flaps and back pockets and its flap, waist loops inner side bartack shall be done.
13. Two spare buttons each for bush jacket and trouser be provided/ stitched on the garment.
14. Pocket lining of same camouflage fabric shall be used.
15. Bottom adjustment dori/ rope of same camouflage fabric shall be attached at bottom of trouser. One end of the rope shall be stitched with the trouser to avoid slippage of dori/ rope during washing.

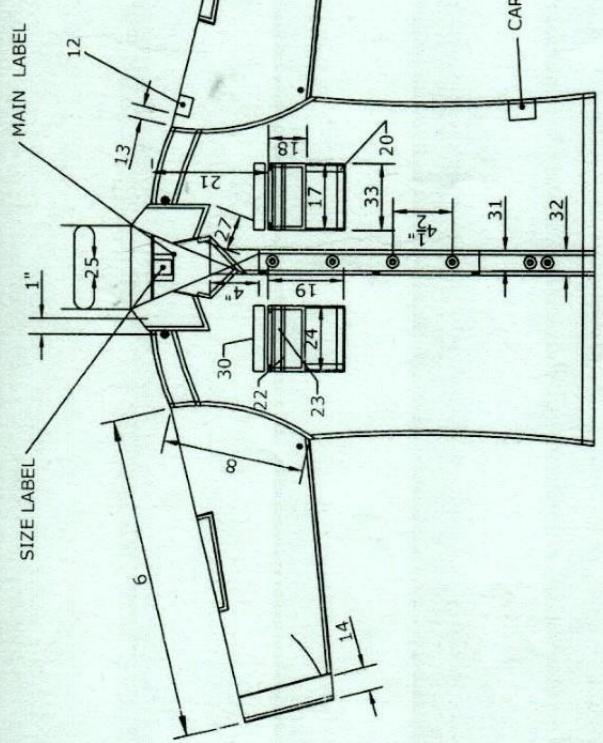
Appendices:

- I. MEASUREMENT SCHEDULE OF DRESS NO. 4 BUSH JACKET AND TROUSER
- II. DRAWING OF DRESS NO. 4 BUSH JACKET AND TROUSER

MEASUREMENT SCHEDULE OF DRESS CAMOUFLAGE BUSH JACKET (INCHES)

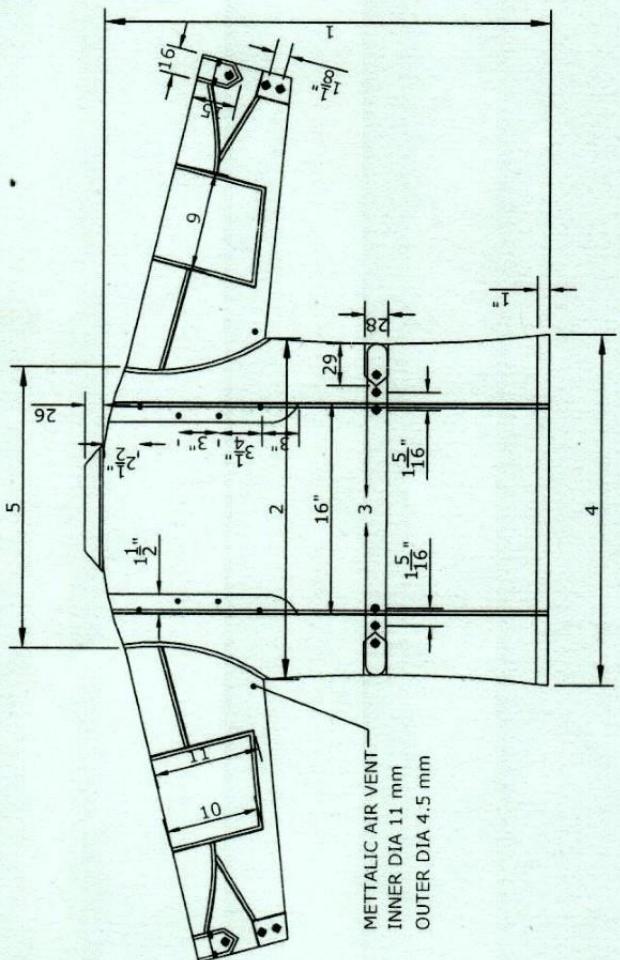
MEASUREMENT SCHEDULE OF DRESS CAMOUFLAGE TROUSER (INCHES)

APPENDIX II TO ANNEX B TO
PN SPECIFICATION NO /2018
PROMULGATION DATE 26 Mar 2018



FRONT VIEW

1252

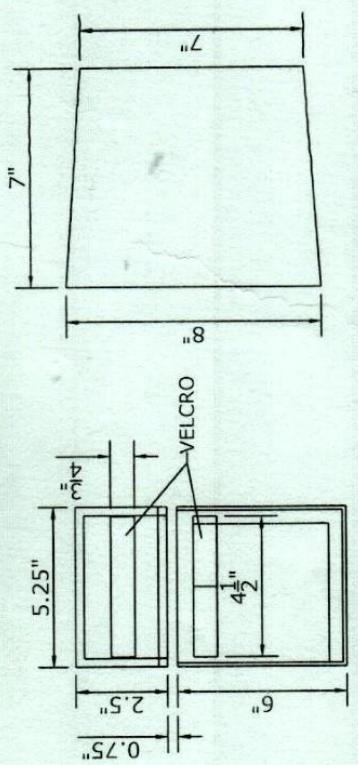


BACK VIEW

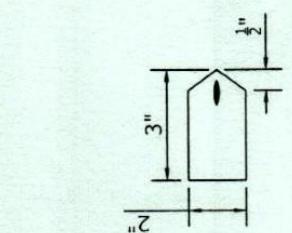
NOTE:
FOR FURTHER DETAILS SEE SEALED STOCK SAMPLE.

DITD KARACHI		TITLE: SHIRT CAMOUFLAGE (MAIN BODY) SIZE- MF-40		DIMENSIONS: INCHES	
S.NO	INC S.NO	INC ITEM	INC ITEM	H.D/M	LTC DR ASMA SOHAIL I/c DWG M.ASGHAR SO.R&D
24		FRONT POCKET VELCRO WIDTH	5	12	FLAG VELCRO SIZE 4x6 CM
23		FRONT POCKET VELCRO HEIGHT	0.5	11	SLEEVE PATCH WIDTH BOTTOM 7
22		FRONT POCKET HEM	1	10	SLEEVE PATCH WIDTH TOP 8
33		FRONT POCKET WIDTH	5.25	21	FRONT POCKET PLACEMENT 7.5
32		FRONT PLACKET W LEFT SIDE	1.75	20	FRONT POCKET SIDE BOX 7.5
31		FRONT PLACKET W RIGHT SIDE	1.25	19	FRONT POCKET LENGTH INCLUDING FLAP 0.75
30		FRONT POCKET TALLY VELCRO	1x5.25	18	FRONT FLAP HEIGHT 6.75
29		SIDE LOOP LENGTH	3	17	FRONT FLAP WIDTH 2.5
28		SIDE LOOP WIDTH	2	16	SLEEVE LOOP WIDTH 2
27		COLLAR CORNER	2.5	15	SLEEVE LOOP LENGTH 3
26		COLLAR HEIGHT FROM CENTER BACK	3	14	CUFF HEIGHT 2
25		COLLAR	15.5	13	FLAG VELCRO PLACEMENT FROM SHOULDER SEAM 1.75
S.NO	INC S.NO	ITEM	ITEM	ITEM	ITEM

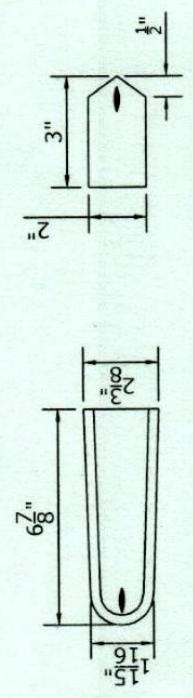
DESCRIPTION 17



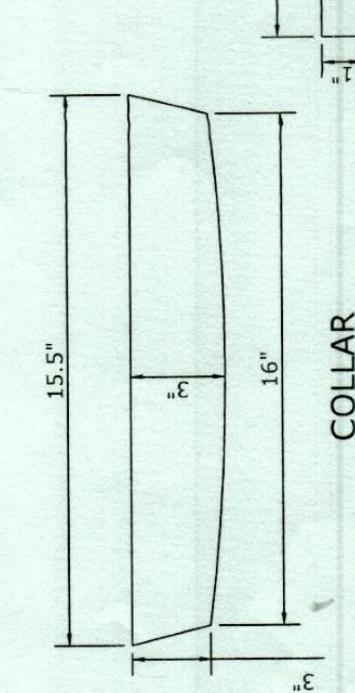
POCKET



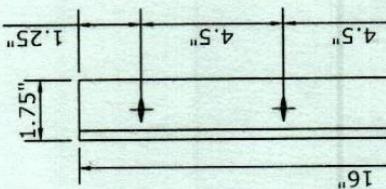
ELBOW PATCH



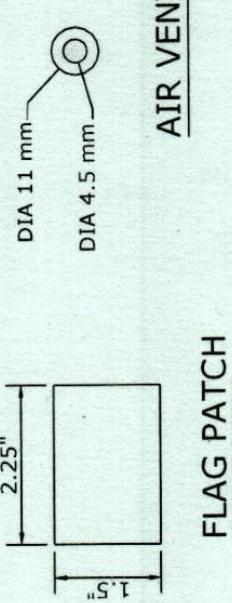
SIDE LOOP SHOULDER FLAP CUFF LOOP



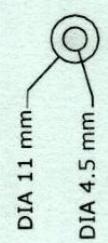
COLLAR



NAME TALLY



FLAG PATCH



AIR VENT

1253

DITD KARACHI

TITLE: SHIRT CAMOUFLAGE
(SMALL PARTS) SIZE: MF-40

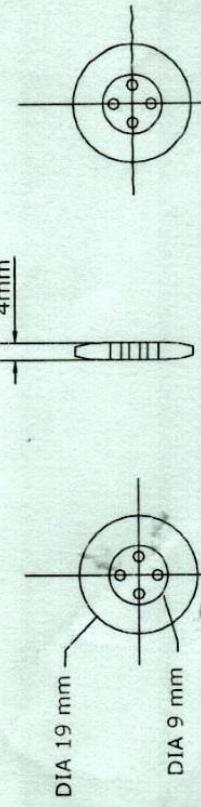
DWG.NO. TD-2446/2018 DIMENSIONS: INCHES
DATE: 28-08-2018 SCALE: N.T.S

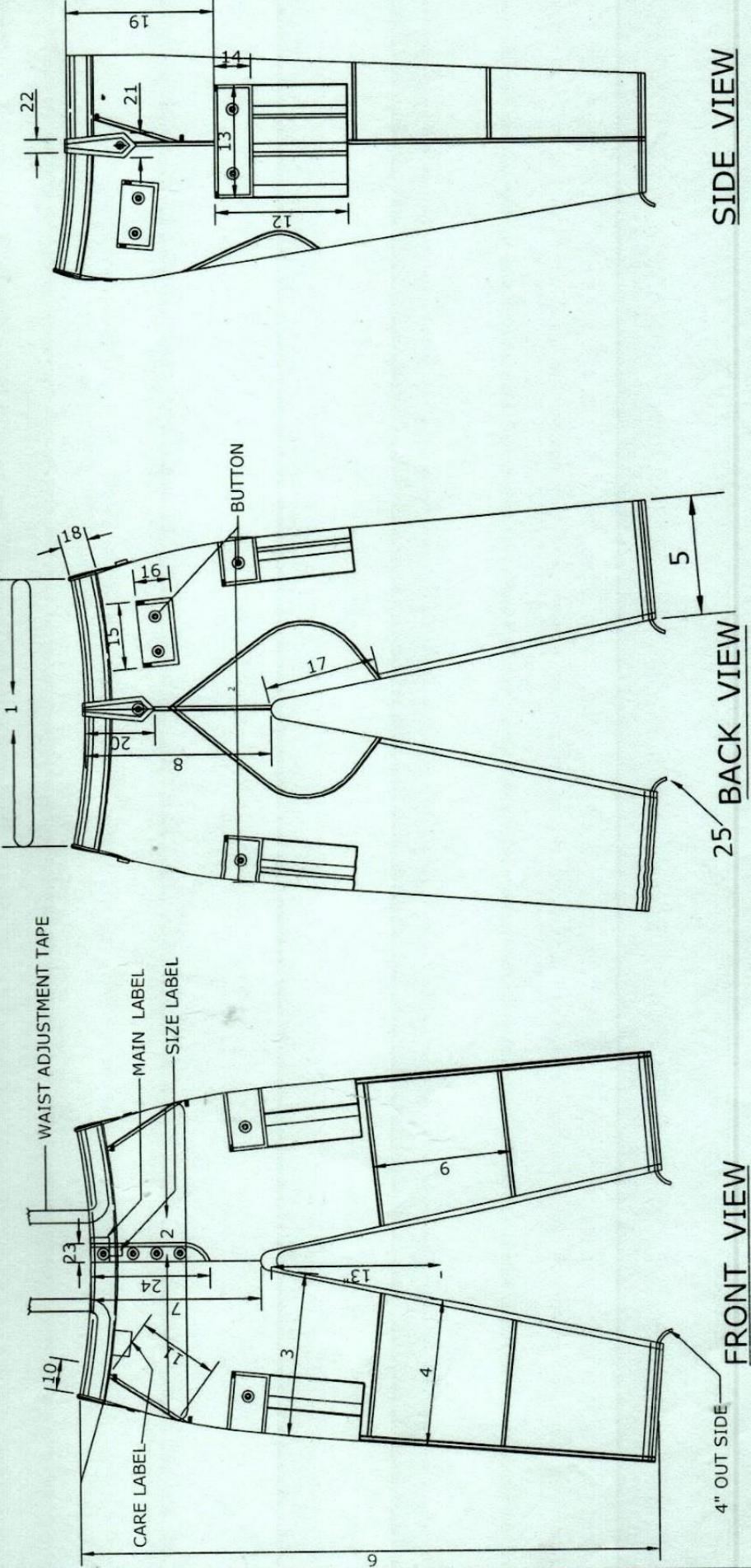
DRAWN BY H.D/M M.ASGHAR APPROVED BY
--SD-- --SD-- --SD--
LTCDR ASMA SOHAIL CDR
SO, R&D AZHAR MIR DTID

NOTE:
18 FOR FURTHER DETAILS SEE SEALED SAMPLE.

BUTTON HOLE TAG

BACK SIDE FRONT
BUTTON SCALE: 1:2





DITD KARACHI

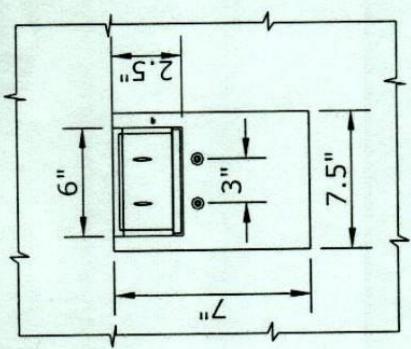
TITLE: TROUSER CAMOUFLAGE
(MAIN BODY) SIZE:MF-36

DWG.NO. TD-2447/2018 **DIMENSIONS: INCHES**
DATE: 28-08-2018 **SCALE:** N.T.S
DRAWN BY CHECKED BY APPROVED BY
--SD-- --SD-- --SD--

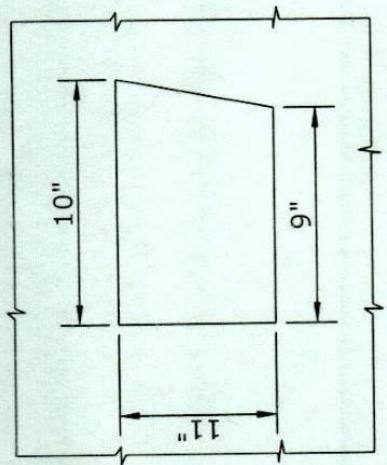
CDR
LTCDR
ASMA SOHAIL
SO.R&D
M.ASGHAR
I/c DWG
AZHAR MIR
DITD

NOTE:
FOR FURTHER DETAILS SEE SEALED SAMPLE.

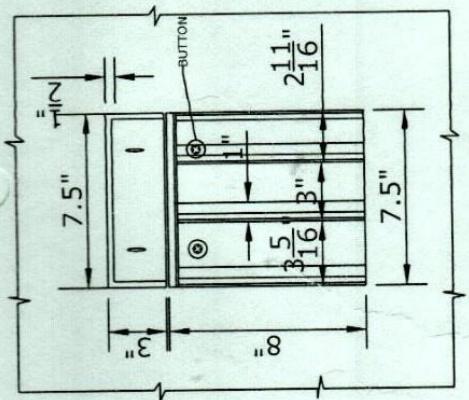
S.NO	ITEM	INC	S.NO	ITEM	INC	S.NO	ITEM	INC
14	THIGH POCKET FLAP HEIGHT	3	13	THIGH POCKET FLAP WIDTH	7.5	12	THIGH POCKET LENGTH	8
25	BOTTOM ADJUSTABLE ROPe	Ø2/8"	11	FRONT POCKET SIDE SEAM	7	10	FRONT POCKET OPENING, WAIST SEAM	2.25
24	FLY LENGTH FULL	7	9	FRONT PATCH LENGTH	10	8	BACK RISE	16.75
23	FLY WIDTH	1.5	7	FRONT RISE	11.75	5	OUT SEAM	39
22	BELT LOOP WIDTH TOP	1	5	BOTTOM	9.25	5	BOTTOM	10.25
21	BELT LOOP WIDTH BOTTOM	1.75	6	KNEE ON 13 FROM CROUCH	28	4	KNEE ON 13 FROM CROUCH	10.25
20	BELT LOOP LENGTH	5	7	THIGH	2.25	3	THIGH	28
19	THIGH POCKET PLACEMENT	10.5	8	HIP (8 FROM BELT)	45	2	HIP (8 FROM BELT)	45
18	WAIST BELT	1.75	9	WAIST	36	1	WAIST	36
17	BACK PATCH INSIDE LENGTH	6.25						
16	BACK POCKET FLAP HEIGHT	2.5						
15	BACK POCKET FLAP WIDTH	6						



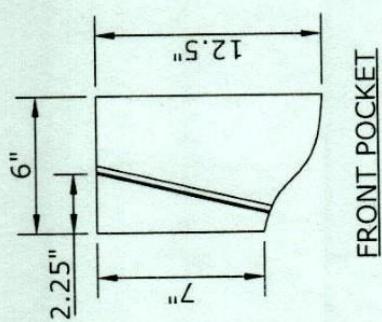
BACK POCKET



KNEE PATCH



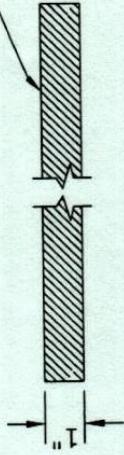
THIGH POCKET



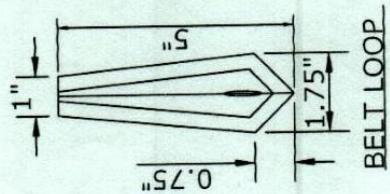
FRONT POCKET

LENGTH EQUALS TO WAIST EXCEEDING 12"

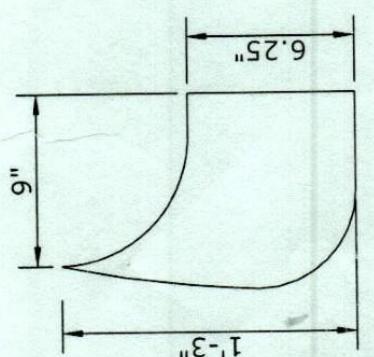
1255



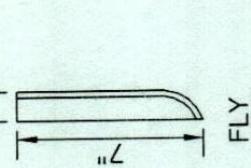
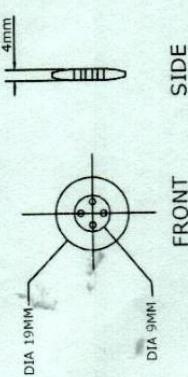
WAIST ADJUSTMENT TAPE



BELT LOOP



HIP PATCH



DITD KARACHI

TITLE: TROUSER CAMOUFLAGE
(SMALL PARTS) SIZE:MF-36

DWG.NO. TD-2448/2018 DIMENSIONS: INCHES
DATE: 28-08-2018 SCALE: N.T.S
DRAWN BY CHECKED BY APPROVED BY

--SD-- --SD-- --SD--
H.D/M LTCDR ASMA SOHAIR CDR
M.ASGHAR AZHAR MIR
I/c DWG. DTD

BUTTON
SCALE: 1:2

NOTE:
20 FOR FURTHER DETAILS SEE SEALED SAMPLE.

TECH. DETAILS OF 'PAK NAVY' SOFT TALLY FOR CAMOUFLAGE DRESS NO 4

S NO	MAIN FABRIC	REQUIREMENT
BASE FABRIC MATERIAL SPECIFICATION		
1.	Material	As per Annex A of this specification
2.	Colour	Light grey or Pantone 15-4003 TCX
EMBROIDERY THREAD MATERIAL SPECIFICATION		
1.	Material	100% Viscose
2.	Color	Black Pantone # 19-4006 TCX
3.	Count of yarn	2/36
EMBROIDERY THREAD PERFORMANCE TESTING		
1.	Color fastness to washing (Test No. 3) a. Change in Shade b. Staining	GS: 4 GS: 4
VELCRO TAPE MATERIAL SPECIFICATION		
1.	Material Male Female	Nylon Nylon
2.	Colour	Light grey or Pantone 15-4003 TCX
VELCRO TAPE PERFORMANCE TESTING		
1.	Manual Sticking/ Unsticking	a. Satisfactory after sticking and unsticking 300 times. b. Satisfactory after sticking ad unsticking 300 times on applying weight of 300g.
2.	Peel Strength (lbs per in width)	1.5
3.	Shear strength(PSI)	10

ANNEX D TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018

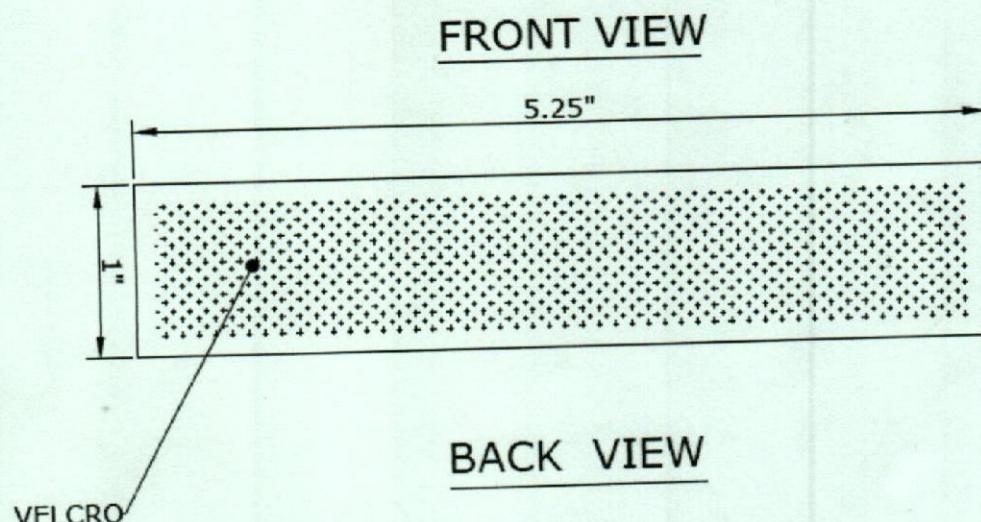
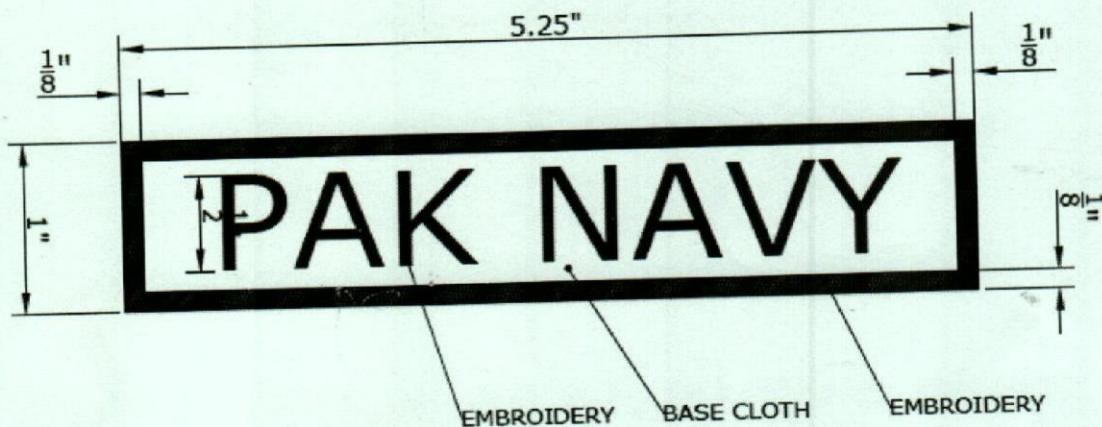
MANUFACTURING DETAILS OF 'PAK NAVY' SOFT TALLY

1. PAK NAVY Soft Tally shall be fabricated in accordance with the shape and design as illustrated in the drawing at Appendix I of this Annex.
2. The thickness of embroidery shall be 3mm.
3. The embroidery shall be neat and clean and all loose ends shall be trimmed off. The embroidery shall be parallel to the centre line of the tally.

Appendix:

- I DRAWING OF 'PAK NAVY' SOFT TALLY.

APPENDIX I TO ANNEX D TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018



1235

DITD KARACHI		
TITLE: SOFT PAK NAVY TALLY FOR CAMOUFLAGE DRESSES		
DWG.NO.	TD-2428/2018	DIMENSIONS: INCHES
DATE:	21-03-2018	SCALE: N.T.S
DRAWN BY	CHECKED BY	APPROVED BY
--SD-- H.D/M M.ASGHAR I/c DWG	--SD-- LT.CDR ASMA SOHAIL SO, R&D	--SD-- CDR AZHAR MIR DITD

NOTE:
FOR FURTHER DETAILS SEE STOCK SAMPLE

ANNEX E TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018

TECHNICAL DETAILS FOR CAMOUFLAGE JOCKEY / SEA CAP

S NO	ITEM	REQUIREMENT
BASE FABRIC MATERIAL SPECIFICATION		
1.	Material specification	As per Annex A of this specification
STITCHING THREAD MATERIAL SPECIFICATION		
1.	Material	Polyester
2.	Color	Light grey or Pantone # 15-4003 TCX
3.	Count of yarn	26/3 3/22.7 Tex + 3%
4.	Construction	3 cord each single
STITCHING THREAD PERFORMANCE TESTING		
1.	Color fastness to washing (Test No. 3)	
	a. Change in Shade	GS: 4
	b. Staining	GS: 4
2.	Strength, cN	2680
3.	Tenacity, cN/Tex	39.24
4.	Elongation %	18.53
PLASTIC PEAK MATERIAL SPECIFICATION		
1.	Material	Plastic (virgin)
2.	Thickness	1.5 -1.7 mm
3.	Hardness	97 \pm 1 IRHD
4.	Density	0.92 g/cc \pm 0.01
CARE LABEL MATERIAL SPECIFICATION		
1.	Material	Polyester with visible printing which remain satisfactory after washing test.
2.	Shade	Nearest to ground fabric color i.e. light grey
EMBROIDERY THREAD MATERIAL SPECIFICATION		
1.	Colour	Black Pantone# 19-4006 TCX
2.	Material	Viscose
3.	Count of yarn	2/44 \pm 2
EMBROIDERY THREAD PERFORMANCE TESTING		
1.	Colour fastness to washing Test No. 3	
	1. Change in Shade	GS: 4
	2. Staining	GS: 4
	Cotton	GS: 4
	Wool	GS: 4

VELCRO TAPE MATERIAL SPECIFICATION

1.	Material Male Female	Nylon Nylon
2.	Colour	Light Grey or Pantone # 15-4003 TCX

VELCRO TAPE PERFORMANCE TESTING

1.	Performance Test 1. Before sticking / unsticking 300 times at 300 g. 2. After sticking / unsticking 300 times at 300g.	Satisfactory Satisfactory
2.	Peel Strength (lbs per in width)	1.5
3.	Shear strength(PSI)	10

MANUFACTURING DETAILS OF CAMOUFLAGE JOCKEY / SEA CAP

- 1 Camouflage Jockey / Sea Cap shall be fabricated in accordance with the shape and design as illustrated in the drawing at Annex C.
- 2 It is a 6 panel style Jockey Cap. The panels are stitched with each other using double needle stitch neatly using 10-12 SPI.
- 3 Pipen used on inner side of Cap is 10mm wide of same fabric used in upper of cap.
- 4 Velcro tape used for adjustment of cap shall be 2.5 cm of best trade quality. The color of Velcro and embroidery on eyelets shall be light grey and matches with the base color of fabric.
- 5 The dia of top Button is 16mm and it is covered with same fabric used in upper of cap.
- 6 Sweat absorbing band and inner side of peak shall be of same upper fabric.
- 7 Care label and identification label may be attached with the sweat absorbing band.

Appendices:

- I MEASUREMENT SCHEDULE OF CAMOUFLAGE JOCKEY / SEA CAP.
- II DRAWING OF CAMOUFLAGE JOCKEY / SEA CAP.

**APPENDIX I TO ANNEX F TO
PN SPECIFICATION NO 01 2018
PROMULGATION DATE 26 Mar 2018**

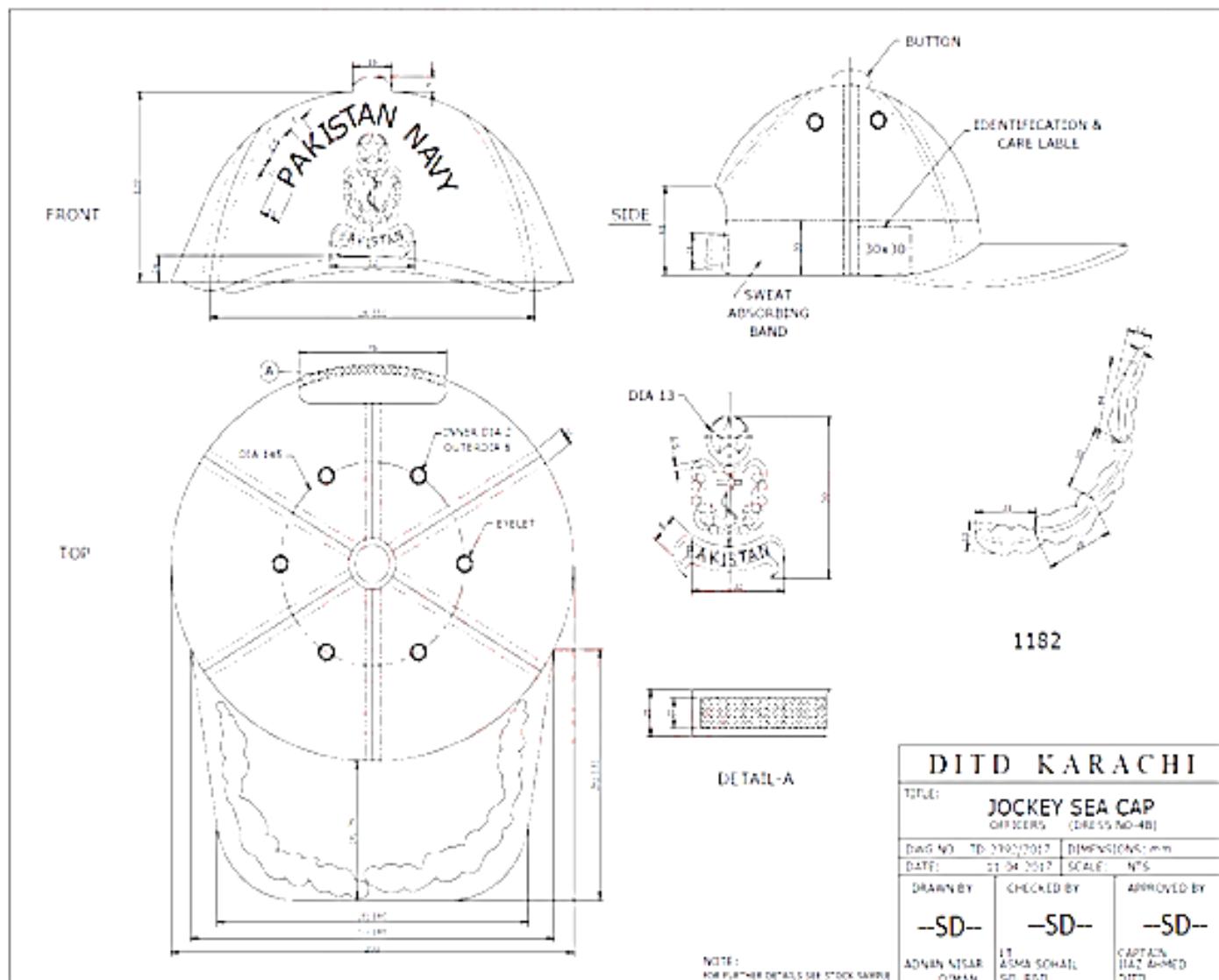
MEASUREMENTS AND DIMENSIONS

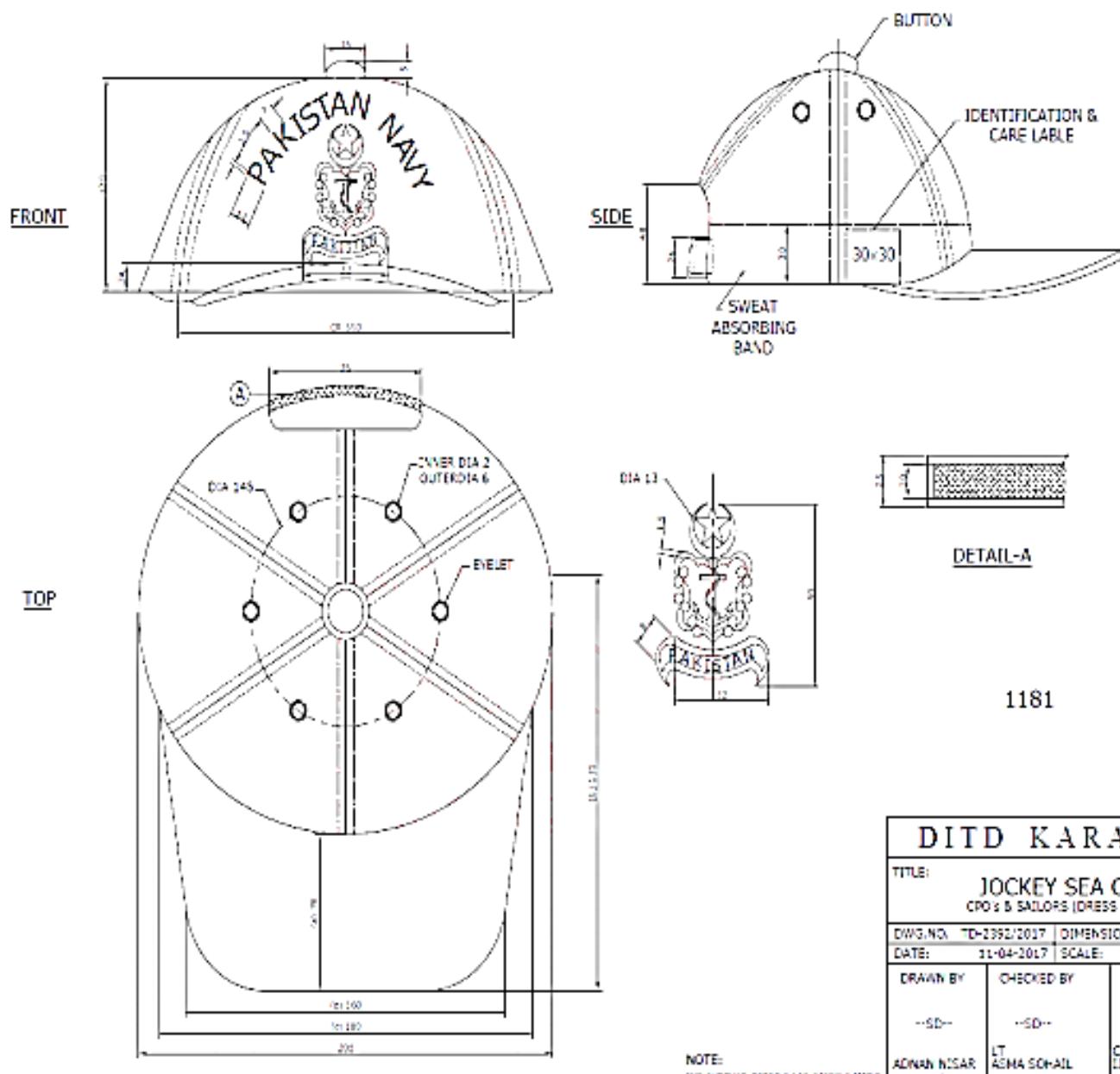
S.No.	DESCRIPTIONS	SIZE CM				TOLERANCE
	Internal circumference	55	57	59	61	+0.5
a.	Peak width from center	7.5	7.5	7.5	7.5	+0.2
b.	Peak width from edges	13	13	13	13	+0.2
c.	Peak Length from bottom edges	16	16	16	16	+0.2
d.	Peak Length from top edges	18	18	18	18	+0.2
e.	Height of Cap	12	12	12	12	+0.5

Note:

The tolerances are given only for made up caps to cover the stitching allowance. Manufacturer will ensure exact size.

PN SPECIFICATION NO 01/2018
APPENDIX II TO ANNEX F TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018





NOTE:
FOR FURTHER DETAILS SEE STOCK SAMPLE

DITD KARACHI		
TITLE: JOCKEY SEA CAP CPO's & SAILORS (DRESS NO-4B)		
DWG. NO. TD-2392/2017		DIMENSIONS: mm
DATE: 11-04-2017		SCALE: NTS
DRAWN BY --SD-- ADNAN NISAR D/MAN	CHECKED BY --SD-- LT ASMA SOHAIL SD, RSD	APPROVED BY --SD-- CAPTAIN HAZZAH AHMED DITD

ANNEX G TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018

TERMS & DEFINITIONS

1. **Inspection Authority.** Chief Inspector of Naval Stores (CINS). His verdict in respect of inspection matters is to be taken as final.
2. **Inspecting Officer.** An officer nominated by the Chief Inspector of Naval Stores (CINS) for carrying out inspection of stores supplied by the supplier, against a specified contract or order, in accordance with the particulars stipulated therein.
3. **Inspector.** The term inspector shall include the "Inspection Authority", inspecting officer and their representatives, duly authorized for the purpose of discharging inspection duties involved.
4. **Sealed Pattern.** It denotes a pattern, sealed and signed by the Inspection Authority & held in his custody, and represents the standard of store in respect of materials, dimensions, design, workmanship and finish, etc. There is only one sealed pattern for each store, which cannot be removed from custody of the inspection authority.

ANNEX H TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018

GUIDELINES FOR INSPECTION – GENERAL DEFECTS

Defect
1. <u>Material Defect and Workmanship Damages</u>
<ul style="list-style-type: none"> a. Any hole, scissor or knife tear, mend, burn or weakening defect, such as smash, multiple float, loose slub, or needle chews, that might develop into hole. b. Cloth stiffened, hardened, or seared by heat, where thermo activated shade. c. Any garment portion puckered, twisted, or pleated at joining seam.
2. <u>Shaded Parts</u>
<ul style="list-style-type: none"> a. Any part shaded or any shade bar.
3. <u>Colour</u>
<ul style="list-style-type: none"> a. Any component of not specified colour.
4. <u>Cleanliness</u>
<ul style="list-style-type: none"> a. Any slub, spot, or stain on outer side. b. Threads ends not trimmed or loose threads ends not removed (to be scored only when condition exists on major portion of garment). c. Any shade identification stamping visible on outer side.
5. <u>Component and Assembly</u>
<ul style="list-style-type: none"> a. Any component not as specified or any defect of component or defect of assembly not herein classified. b. Any component, component part, or required operation omitted or any other operation improperly performed not herein specified/ classified.
6. <u>Seams and Stitching</u>
<ul style="list-style-type: none"> a. Any seam twisted, puckered, or pleated (unless otherwise classified herein) b. Any part of Jacket and Trouser caught in unrelated operation or stitching.

- c. Any edge not properly forced out, i.e, having fold more than specified.
- d. Ends of stitching that are not caught in other seam or stitching not securely tacked.
- e. Ends of seams or stitches that are not caught in other seams or stitching secured but backstitched for distance less than specified.
- f. Thread breaks not securely overstitched
- g. Stitching tension tight resulting in breakage of stitches when normal pull is applied.
- h. Stitching per 20 mm on major portion of seam one or two stitches more or less than specified, except on labels.
- j. Stitches per 20 mm on major portion of seam more than three stitches more or less than specified, except on labels.
- k. Any bar tacks omitted, loose, misplaced or not serving intended purpose.
- l. Three or more bar tacks missing, loose, misplaced, or not serving intended purpose on multiple pencil compartment pockets.
- m. Skipped or broken stitches in two or more sewn eyelets
- n. Stitch tension loose resulting in loose seam.
- p. Stitches in sewn eyelet one or two stitches less than specified.

PN SPECIFICATION NO 01/2018
ANNEX J TO
PN SPECIFICATION NO 01/2018
PROMULGATION DATE 26 Mar 2018

FEED BACK FORM

Item Designation: _____

Pattern #: _____

Parent Equipment: _____

PN SPEC #: _____

Problem Faced: _____

Technical Solution: _____

Financial Effect (if any): _____

Name Stamp

COUNTERSIGNED

Name Stamp

RESTRICTED



IMMEDIATE
DID
OFFICE OF NRD (ITD
WING)

PN/DID/GENERAL/9585688 58455

See Distribution 02 August 2024

PROMULGATION OF AMENDMENTS IN PN SPECIFICATIONS : INCLUSION OF SECURITY CLAUSE IN PN SPECIFICATIONS OF CAMOUFLAGE DRESSES

Reference(s):

A. PN/NS Dte/GENERAL/2142599 dated 31 July 2024

Apropos reference A, amendments in following PN Specifications of Camouflage Dresses and Weather proof Jackets are promulgated herewith for compliance/ future reference, please:

S.No	PN Specifications	Description
a.	03/ 2018	Dress Pak Marines 60% Cotton - 40 % polyester
b.	10/2014	Dress Pak Marines 100% Cotton.
c.	04/ 2018	Dress SSG(N) 60% Cotton - 40 % polyester
d.	08/2014	Dress SSG(N)-100% Cotton
e.	02/2018	GSD Dress 4 60% Cotton - 40 % polyester
f.	01/2018	GSD Dress 4 100% Cotton
g.	05/2019	Weather Proof Jackets

AZHAR HUSSAIN TI(M)
CAPT PN
DID

RESTRICTED

RESTRICTED

Encl(s):

1. Amendment in PN Specifications w.r.t inclusion of security clauses

Distribution:

External:

Action:

CSD N

Attn: CO PNCSD

Chief Inspector of Naval Stores

Attn: IO CLOTHING CINS

DP Navy

Attn: ADP 33 PRE AND POST

Information:

DNS

DCINS

Internal:

Information:

MD ITD (AOL)

DID

Attn: SO TEXTILE I ID

PN/DID/GENERAL/9585688 approved by DID CAPT PN AZHAR HUSSAIN TI(M) on
02 August 2024 (1022 Hrs)

Note: Computer generated documents do not require signature

RESTRICTED

AMENDEMENTS IN PN SPECIFICATION 01/2018
GSDC DRESS 4 100% COTTON

<u>FOR</u>	Article No	Page No	ITEM
	16.	7	<u>PACKING DETAILS</u> The store when ordered to be delivered 'PACKED' shall be packed as per following instructions: <ul style="list-style-type: none"> • The Dress shall be packed in a neat, dry and clean condition in standard polyethylene bags • 10 Dresses shall be further packed in a thick Boxboard • Each Box Board packing shall be securely and properly packed • Each box board shall consist of same size
	17.	8	<u>IDENTIFICATION LABEL</u> Each Dress shall bear following minimum information mentioned on identification label, attached as indicated in the drawing: <ol style="list-style-type: none"> a. Item name/ Item description with NSN/ Pattern No. b. Material Composition and size. c. Contract number and Date. d. Year of Manufacturing. e. Firm's name, initials or Trade mark. f. Batch no.

READ

Article No	Page No	ITEM
16.	7	<u>PACKING DETAILS</u> <p>16.1. The store when ordered to be delivered 'PACKED' shall be packed as per following instructions:</p> <ul style="list-style-type: none"> • The Dress shall be packed in a neat, dry and clean condition in standard polyethylene bags • 10 Dresses shall be further packed in a thick Boxboard • Each Box Board packing shall be securely and properly packed • Each box board shall consist of same size

16.1.1 Unique Security Code As embossed on the Inside of each items along with corresponding Barcode, may also be indicated on outside of each polythene bag in form of stickers at a suitable place.

- Complete list of tracking/ security code must be placed inside the thick Boxboard/ Flouring.

17

8

IDENTIFICATION LABEL

17.1. Each Dress shall bear following minimum information mentioned on identification label, attached as indicated in the drawing:

- a. Item name/ Item description with NSN/ Pattern No.
- b. Material Composition and size.
- c. Contract number and Date.
- d. Year of Manufacturing.
- e. Firm's name, initials or Trade mark.
- f. Batch no.

17.2. Unique Security/ Tracking Code Mechanism Same with permanent ink should be embossed in the following way on inside of each Shirt and Trouser at a suitable place:

- a. A unique security/tracking code (10-12 digits) with permanent ink should be embossed/ printed on the inner side of each Shirt and Trouser (preferably at collar or cuff) as well as the Trouser (inner side of the front/back pocket or waist belt).
- b. The complete security/ tracking code must start with a 4-letter alphabet to represent manufacturing supplier/ firm name followed by 6 to 8 digits. For instance, 'ABCD00010786' for M/s ABCDE or 'CBDA00020786' for M/s CBDAEF.
- c. Specific alphabet should be defined in indent of store initiated by concerned depot.