



PAKISTAN NAVY SPECIFICATION 01/2023  
PROMULGATION DATE: 23 OCTOBER 2023

## **CAP PEAK WHITE FOR OFFICERS**

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**PROMULGATION ORDER**

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

1. 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**

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 G. 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**

**PN SPECIFICATION 01/2023**  
**CAP PEAK WHITE FOR OFFICERS**

**0101. DESIGNATION**

1. Cap Peak White for Officers.

**0102. USAGE**

1. These Cap Peak White will be worn by PN Officers with Working and Ceremonial Dresses.

**0103. INTRODUCTION**

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. This specification supersedes and replaces Drawing No of PBR 81 (g/023/93 of 23 Feb 93, G/1697/94 of 16 Feb 94, G/161/194 of 13 Feb 94) and all other specifications/ technical details promulgated earlier in relation to the items mentioned herein. Any alteration or addition in this specification can be suggested to ITD wing (NRDI). However, it cannot be implemented without prior approval from DNS.

2. This specification booklet includes 07 Annexes and consists of 29 pages, including the cover.

**0104. SCOPE**

1. This specification covers the technical/ manufacturing requirements of Cap Peak White for officers worn with working and ceremonial Dresses. It defines and lays down the quality standards, details of materials, workmanship and finish. It also defines brief requirement and process of sampling, testing, inspection acceptance/ rejection, marking, preservation, packing and delivery etc. of Cap Peak White for officers.

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 documents that have been referred to in this specification are:

a.	AATCC-20 A	Fiber Analysis –Qualitative.
b.	AATCC-08-2016	Color fastness to Rubbing
c.	ASTM D 8136-17	Method for calculating thickness of plastic
d.	ASTM E 158	Material analysis of Steel
e.	BS 1006	Color fastness to Light
f.	BS EN ISO 12945-2	Determination of pilling and fuzzing
g.	ISO 3801	Determination of Mass per unit Length
h.	ISO 7211/5	Determination of count of yarn
j.	ISO 105-E01	Color fastness to water.
k.	ISO 105 E02	Color fastness to sea water

I.	ISO-105-E04	Color Fastness to Perspiration
m.	ISO 105 E04	Color Fastness To Perspiration
n.	ISO 105 C10 C(3)	Color Fastness to Washing
p.	ISO 105 J02	Method for Calculating Berger Value
q.	ISO 4592	Plastic- Film and Sheeting Determination of Length and width
r.	ISO- 9237	Determination of air permeability
s.	ISO 105 D01	Colour fastness to Dry- cleaning
t.	ISO 105 X-18	Method to determine Phenolic Yellowing value

#### 0106. DEFINITIONS & ABBREVIATIONS

1. Definitions for the terms used in this standard are given at Annex A of this specification.

#### 0107. TECHNICAL DETAILS OF CAP PEAK WHITE FOR OFFICERS

1. The Technical Details of Cap Peak White for officers are mentioned at Annex B of this specification.

#### 0108. MANUFACTURING DETAILS OF CAP PEAK WHITE FOR OFFICERS

1. Peak. The peak (synthetic material) is sandwiched with upper glazed plastic or embroidered vicuna fabric and inner Rexene. The edge of the peak is to be bound using seam type (lock stitch) with the join at the center back of the cap.

2. Pattee round. A pattee round is to be used to provide the rigidity/ Stiffness for the crown, and should be round shape.

3. Crown Cover Cloth. Crown cover should be 100% polyester with Berger value of 160. The absorbent fabric is to be positioned 1cm above the base of the crown former. The absorbent fabric when attached by either drumming or by conventional methods must provide the same degree of comfort as that provided by the standard Pattern.

4. Additional Headband/ Mohair band. The additional headband is to be seamed 1.5 cm with the corners turned and stitched to avoid fraying. The band is to be positioned with the joint at the center front.

5. Chin strap and Loop. A ribbon cut approximately 10cm long (effective length no less than 2cm doubled), is to be securely sewn.

6. Seams and Stitching to BS 3870. Machine stitching is to be lock stitch with atleast eight but not more than ten stitches per 2cm.Unless otherwise stated in the body of the specification.

7. General. Sewing thread may be treated with stain free lubricants. The cap are to be free from all ends of sewing thread, be locked and pressed to retain the required appearance and uniform shape. All seams are to be free from pucker. The contractor must ensure that the cap is manufactured with a high regard to appearance, comfort and durability.

8. Label (Identification & care) will be printed on a suitable fabric and stitched/ printed on inner side of PN Officers Cap as per Annex D.

9. Measurement schedule is define at Annex C

#### **0109. QUALITY OF WORKMANSHIP AND FINISHING**

1. The Workmanship and finish of PN Officers Cap shall be best in quality and to the entire satisfaction of the Inspector.

#### **0110. TESTING**

1 The stores/ material during manufacturing and after delivery shall be tested and examined as Inspector may consider necessary in order to determine whether they conform to Annex B of this specification. Inspecting Authority reserves the right to get any B/R samples tested from any reputable Laboratory other than PN wherever considered important by Inspecting Authority.

#### **0111. BULK REPRESENTATIVE SAMPLES OF PN OFFICERS CAP**

1. No of cap peak of numerous sizes/design drawn from offered quantity/ production for inspection/ testing or as per instruction of Inspecting Officer (if deemed appropriate) as per following table:

<b>Lot Size</b>	<b>No. Samples</b>
300 ≥500	03
501 ≥ 800	05
801 ≥ 1300	07
1301 ≥3200	10
3201≥8000	15
8001≥22000	30
22001≥110000	40

#### **0112. TENDER SAMPLE**

1. Tender sample to be approved by TSR Committee.

2. For each contract following material shall be supplied by the manufacturer at the time of tendering:

a.	PN Officers Cap	04 x samples
b.	Inner Crown (Plastic Shell)	03 Samples/ 02 mtr
c.	Mohair Band/ Head Band	02 mtr
d.	Brim Binding	02 Samples/ 02 mtr
e.	Inner Lining	02 mtr
f.	Head Fabric	03 mtr
g.	Cover	02 mtr
h.	Chin Strap & Loop	01 mtr
j.	Thread for all Sewing	03 Bobbin each/ 100 mtr
k.	Other relevant accessories	Suitable quantity for testing

3. Firm shall provide tender sample alongwith Quality verification report from an accorediated lab.

#### 0113. ADVANCE SAMPLE

1. Advance sample or pre-production sample, when required, shall be submitted in accordance with terms of the contract for inspection, as per Annex B, C and D and approved by CINS.

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 01 % of the contract or suitable quantity for inspection and testing.

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. 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 (if deemed necessary).

4. The pre-production sample shall be manufactured by the manufacturer with the same facilitates which will be used for manufacturing of the bulk items.

5. Firm shall provide advance sample along with quality verification reports from an accredited laboratory, to ensure compliance of quality assurance parameters during production/ final internal inspection.

#### 0114. INSPECTION

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

2. PN Officers Cap shall be tested and examined during manufacturing/ Stage inspection as Inspector may consider necessary, to determine whether they conform to PN specification w.r.t quality or not.

3. Inspection o f PN Officers Cap. The guidelines for Inspector w.r.t General defects are defined at Annex E and Acceptable Quality Level (AQL) is defined at Annex F. PN Officers Cap shall be examined to ensure correctness of material, shade, width, evenness of dyes and other constructional details.

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

a. Stamping of accepted stores: Each PN Officers Cap shall be stamped with Inspectors individually acceptance mark close to contractor marking/ labelling.

b. Stamping of rejected stores: The rejected items shall be marked with inspectors rejection mark close to contractor marking/ labelling to avoid resubmission by the supplier.

5. 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.

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

7. Responsibility for Inspection. The supplier is responsible for the performance of all inspection requirements (examinations, tests etc.) 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.

8. 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).

9. Replacement by the Contractor. The supplier 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.

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

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

#### **0115. SPECIAL INSTRUCTIONS**

1. Care Label Instructions. Following care instructions in the form of leaflet OR attached with PN Officers Cap shall be provided in English and Urdu:

- a. Peak cover washed/ rinsed with Warm/ hot water.
- b. Stain removing bleach should be avoided.
- c. Prolonged contact with sunlight should be avoided etc.

#### **0116. PACKING AND PRESERVATION DETAILS**

1. Quality of packing shall be examined/ tested as the Inspector may consider necessary in order to determine whether they conform to this specification.

- a. Packing. The store when ordered to be delivered 'PACKED' shall be distributed evenly in each carton.

- (1) Each PN Officers Cap will be packed and wrapped in transparent Polythene (virgin low polyester) Zipper bag having thickness of 2-3 mils (mils = 0.001 inch OR 0.0254 mm).
- (2) The Polythene shall be of sufficient size to ensure PN Officers Cap are protected.
- (3) 01 x PN Officers Cap further packed in card board box and secured with tape.
- (4) Packing, marking and preservation will be done by the supplier as per specification and with adhesive tape of 10cm width of the best quality.
- (5) 10 x Boxes Officers Cap will be packed neatly in suitable carton.

2. Packing Slip. A Packing Slip shall be enclosed in each package giving full details about the store packed i.e. Cat No. designation, quantity packed, contract No, Challan No and date I/Note No or Voucher No. and date, consignee, consignor, date of packing and packer's signature, Package No and weight of the individual Package.

#### **0117. IDENTIFICATION LABEL**

1. Each PN Officers Cap shall bear following clear and indelible information on back side of lable:

- a. Item name/ item description with size and NSN/ patt no.
- b. Contract number and Date.
- c. Year of manufacture.
- d. Firm's name, initials, or trade mark.
- e. Batch no.

#### **0118. PACKING LIST**

1. Firm is bound to provide a packing list of store offered for inspection along with the challan, which include complete details about the store i.e. Pattern No., Description of stores, size, quantity, contract No., and Date, Challan No. date and I/Note No. or voucher No. and date, consignee, Manufacturer/ firm's name, date of packing and packer's signature, QA certificate /Lab test report from any accredited lab.

#### **0119. MARKING OF STORES**

1. Each carton of PN Officers Cap will stenciled with quick drying Black indelible ink/ print in clearly define characters as per followings:

- 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 Instructions.
- (5) Quantity of the Item packed.
- (6) Signature along with stamp of Packaging Manager/ rep of firm.

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.
- (6) Destination i.e. Railway station/ (Navy).

**0120. 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, stage inspection, storage at firm's and consignee premises, proper packing, dispatch and delivery up to consignee.

XXXXSDXXXX

**Annexes:**

**M YASSAR YAHYA**  
Captain Pakistan Navy  
Director

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## DEFINITIONS & ABBREVIATIONS

### 1. DEFINITIONS

a. Following definitions are used in this specification and will be adopted for use:

(1) Inspector. The term inspector shall include the "Inspection Authority", Inspecting Officers and their representatives, duly authorized for the purpose of discharging inspection duties involved.

(2) Inspection Authority. Chief Inspector of Naval Stores (CINS). His verdict in respect of Sealed Inspection matters is to be taken as final.

(3) Inspecting Officers. An Officers 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.

(4) Acceptance Quality Level (AQL). It represent allowable limit/tolerance of defects or non-conformities in an offered store/ lot/ batch. It represent in percentage, also known as Allowable Quality Limits.

(5) Minor Defects. They are small insignificant issues that don't affect the function or form of the item. Highest tolerance of AQL has been set for minor defects.

(6) Major Defects. They would likely result in product return but don't poses safety risk. AQL tolerance depend upon the description/ quality of finished product.

### 2. ABBREVIATIONS

a. Following abbreviations are used in this specification and will be adopted for use:

- (1) CINS: Chief Inspector of Naval Stores
- (2) DID: Directorate of Inventory Deletion
- (3) DNS: Directorate of Naval Store
- (4) PNCSD: Pakistan Navy Clothing Store Depot
- (5) PNCTA: Pakistan Navy Central Testing Authority

ANNEX B TOTECHNICAL DETAILS OF CAP PEAK WHITE FOR OFFICERS

S.NO	ITEMS	STANDARDS	RESULT
1.	<b>Height of peak</b>		
a.	Front side	Physical analysis	11 ± 0.5cm
b.	Back side	Physical analysis	7 ± 0.5 cm
2.	<b>Peak</b>		
a.	Material	AATCC 20 A	Synthetic polymer sheet (virgin)/ Leather board/ plastic
b.	Upper cloth( for Cdr and above)		Vicuna black/ Blaser Black Cloth 19-4007 TCX /(jet Black)
c.	Upper cloth( for Lt cdr and below)		Glazed plastic 19-4007 TCX (Black)
d.	Glazed plastic thickness	ASTM D 8136-17	0.50± 0.05mm
e.	Peak (synthetic sheet) thickness	Physical analysis	2 ± 0.5mm
f.	Back cloth	AATCC 20 A	Rexene Black -19-4007 TCX (Black)
g.	Back cloth Thickness	ASTM D 8136-17	0.5± 0.05mm
h.	Wreath Oak  (1) Cdre and above (2) Capt and Cdr (3) Lt Cdr and below	Visual analysis	Embroided Golden Dabka Gijjai & Zarri 02 Rows 01 row Nil
j.	Width of Oak leaves	Physical analysis	19mm ±0.5mm
k.	Outer Core of Peak	Visual analysis	Patent leather (Glazed plastic)
3.	<b>Pattee round</b>		
a.	Material	AATCC 20 A	Synthetic polymer (ABS / PET) / Leather board
b.	Width	Physical analysis	5.6± 0.5 cm
c.	Thickness	Physical analysis	1.5 ± 0.5mm
d.	Outer core of pattee round	Visual analysis	Glazed plastic
4.	<b>Inner of pattee round</b>		
a.	Material	AATCC 20 A	Rexene/Leather
b.	Width	ISO 4592	4 ± 0.2mm
c.	Thickness		1.5 ± 0.05mm
5.	<b>Outer of pattee round</b>		
a.	Material	AATCC 20 A	Stretchable jersey
b.	Colour	Visual analysis	Black
6.	<b>Brim Binding/ piping joining Peak and Pattee ( Ribbed walls)</b>		
a.	Material	AATCC 20A	Cotton/ PC blend
b.	Construction	Visual analysis	2x 2 twill

c. Width	Physical	$5 \pm 1\text{mm}$	
d. Color	Visual analysis	19-4007 TCX (Black)	
e. Color fastness to light	AATCC 16	GS 4 or Better	
f. Color fastness to Rubbing (1) Wet (2) Dry	ISO-105- X12	GS 4 or Better GS 4 or Better	
g. Color Fastness to Perspiration (1) Change in Shade (2) Staining	ISO 105 E04	GS 4 or better GS 4 or better	
<b>7. Absorbent lining</b>			
a. Material	AATCC 20 A	Velvet/ Jersey cloth	
b. Colour	Visual	Black	
c. Length	ASTM D 8136-17	$25 \pm 0.5\text{ cm}$	
d. Width		$2 \pm 0.5\text{ cm}$	
e. Color Fastness to perspiration (1) Change in shade (2) Staining	ISO 105 E04	Acid 4/5	Alkaline 4/5
<b>8. Supporting for badge ( leather board / shank)</b>			
a. Material	AATCC 20 A	Leather board pivoted with round pattee	
b. Thickness	ISO 2958	$1.5 \pm 0.5\text{mm}$	
c. Outer cover at badge strengthening	AATCC 20 A	Rexene white	
d. Thickness of outer cover	ASTM D 8136-17	$0.74 \pm 0.2\text{ mm}$	
e. Piping to join ring and badge strengthening	AATCC 20 A	Rexene white	
f. Thickness of piping	ASTM D 8136-17	0.62mm	
g. Shank ( if available)			
(1) Material	ASTM E 158	Stainless steel	
(2) Length	ASTM D 8136-17	7cm	
(3) Width		1.5 cm	
(4) Thickness		1.2 cm	
h. Outer pattee at badge strengthening			
(1) Material	Visual Analysis	Rexene	
(2) Color	ISO 2598	Black	
(3) Thickness	Visual Analysis	1.12mm	
<b>9. Supporting pattee</b>			
a. Material	AATCC 20 A	Rexene	
b. Thickness	ASTM D 8136-17	$1.2 \pm 0.2\text{ mm}$	
<b>10. Mohair Band/ Head Band</b>			
a. Material	AATCC 20 A	100% Polyester( Petersham ribbon)/ Elastic Polyester/ wollen black	
b. Color	Visual analysis	19-4007 TCX Or Black	
c. Dimension (Width)	Physical analysis	2 - 3.5"	

	d. Color Fastness to Light (1) Change in Shade (2) Staining	AATCC 16 or BS 1006	GS 4 or better GS 4 or better
	e. Color Fastness to Water (1) Change in Shade (2) Staining	ISO-105-E01	GS 4 or better GS 4 or better
	f. Color Fastness to Sea Water (1) Change in Shade (2) Staining	ISO-105-E02	GS 4 or better GS 4 or better
11.	<b>Cap Badge</b>		
	a. Base cloth	AATCC 20 A & Physical analysis	Blazer Black
	b. Inner cloth		Buckram
	c. Lining		Binding cloth (Cotton)
	d. Embellishment (wreath oak) (1) Centre line (2) Embroidery		Golden
			Gijjai
			Dabka
	e. Anchor (1) Body	Aluminum 99%	
		Silicon and other impurities	
		0.10% OR Stainless steel	
		Dabka Silver	
		Anodized and lacquered	
	f. Crescent and Five pointed Star (1) Outline (2) Embroidery (3) Base fabric	Golden	
		Gijjai/ zarri	
		Dabka	
		Red Velvet (BCC 210)	
12.	<b>Chin Strap</b>	AATCC 20 A	
	a. Material (1) Admiral (2) S/Lt and above		Golden lace/ Braid Tilla Rexene (outer), Foam (inner)
	b. Width	ISO 4592	12± 0.2mm
13.	<b>Crown Ring</b>	AATCC 20 A	Leather board/ S.S/ M.SI ring and covered with plastic
	a. Material		
	b. Width of plastic		ISO 4592
	c. Dia	Physical analysis	25 ± 0.5 cm
14.	<b>Crown cover cloth</b>		
	a. Material	AATCC 20 A	Knitted Polyester 100%
	b. Knitted pattern	Visual analysis	Twill (Pique embossed grain effect - Cloth)
	c. Berger whiteness	ISO-105-J02	150-160
	d. Count of yarn (1) Warp (2) Weft	ISO 7211/5	300 ± 10 Denier 300 ± 10 Denier
	e. GSM	ISO-3801	250 ± 10 gm
	f. Color Fastness to Washing	ISO 105 C10	

	(1) Change in Shade (2) Staining	C(3)	GS: 4 or better GS: 4 or better
	g. Color Fastness to Light (1) Change in Shade (2) Staining	AATCC 16	GS: 4 or better GS: 4 or better
	h. Color Fastness to Water (1) Change in Shade (2) Staining	ISO-105-E01	GS: 4 or better GS: 4 or better
	j. Color Fastness to Sea Water (1) Change in Shade (2) Staining	ISO-105-E02	GS: 4 or better GS: 4 or better
	k. Air permeability (Pressure:100 pa Test area 20 cm <sup>2</sup> )	ISO- 9237	≥80 mm/sec
	l. Pilling and Fuzzing (7000 cycles)	BS EN ISO 12945-2	GS-4 or better
	m. Phenolic Yellowing test value	ISO 105 X-18	GS-4 or better
15.	<b>Button for securing crown cover on pattee</b>		
	a. Material	ASTM E 158	Stainless steel
	b. Dia	Physical Analysis	0.8 mm
16.	<b>Buttons Guilt</b>		
	a. Material	ASTM E 158	Brass ( gold plated & lacquered)
	b. Dia	Physical Analysis	12 mm
17.	<b>Eyelets and Chin Strap</b>		
	a. Material	ASTM E 158	Brass
	b. Inner Dia	Physical Analysis	5 mm
	c. Outer Dia	Physical Analysis	2 cm
18.	<b>Stitching/ hamming thread</b>		
	a. Material	AATCC-20A	100 % polyester
	b. No of stitches per inch(SPI)	Physical Analysis	13
	c. Shade	Visual Analysis	White and black
	d. Construction	Visual Analysis	03 each single
19.	<b>Lining under crown</b>		
	a. Material	AATCC-20A	Buckram & foam
	b. Thickness	ASTM D 8136-17	1 mm
20.	<b>Air Vent</b>		
	a. Material	Chemical analysis	Mild steel
	b. Lacquered	Visual / chemical	Nickel coating Finish
	c. Dia (1) Inner (2) Outer	Physical Analysis	10 ± 1mm 18 ± 1mm

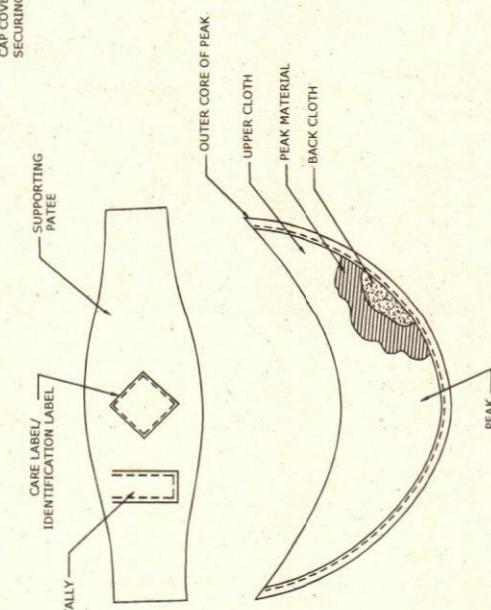
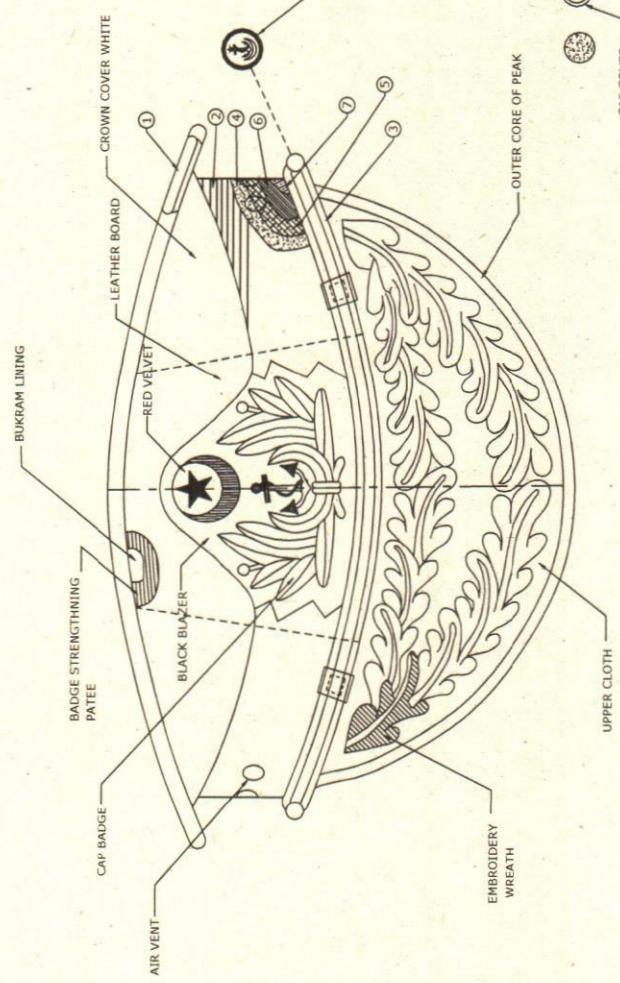
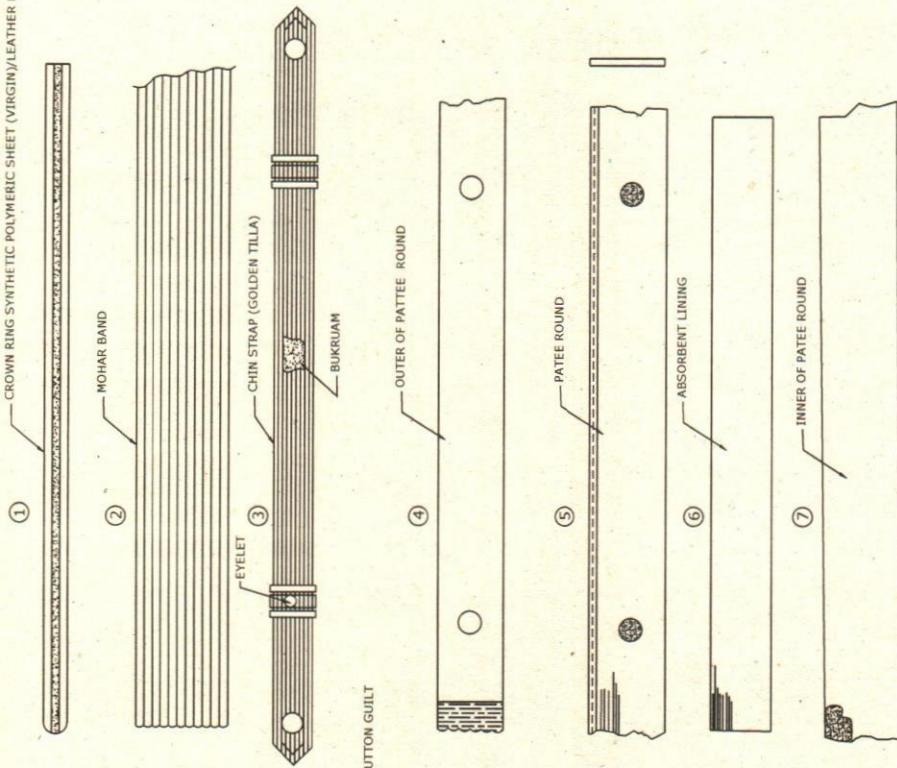
ANNEX C TOPN SPECIFICATION NO 01/2023PROMULGATION DATE 23 OCT 23MEASUREMENT SCHEDULE OF CAP PEAK

<u>Size head</u>	<u>Internal Circumference (mm)</u>
152.4	479.4
155.5	488.9
158.7	498.4
161.9	508
165.1	520.7
168.2	530.2
171.4	536.7
174.6	549.2
177.8	558.8
180.9	568.3
184.1	577.8
187.2	590.5
190.5	600
193.6	609.6
196.8	619.1
199.3	628.6
203.2	638.1

## TECHNICAL DRAWING

ANNEX 'D' TO  
PN SPECIFICATION NO. 01/2023  
PROMulgATION DATE. OCT 2023

CROWN RING SYNTHETIC POLYMERIC SHEET (VIRGIN)/LEATHER BOARD/PLASTIC)



MDITD NRD1	
TITLE: CAP PEAK WHITE (ADMIRAL)	
DWG.NO.	TD-2686/2023
DATE:	07-04-2023
SCALE:	NIS
REVISON NO.	00
DRAWN BY	CHECKED BY
M. ASGHAR HDM	LT CDR SANA KANWAL SO, TEXTILE
	CAPTAIN MYASSAR YAHIA DIRECTOR ID

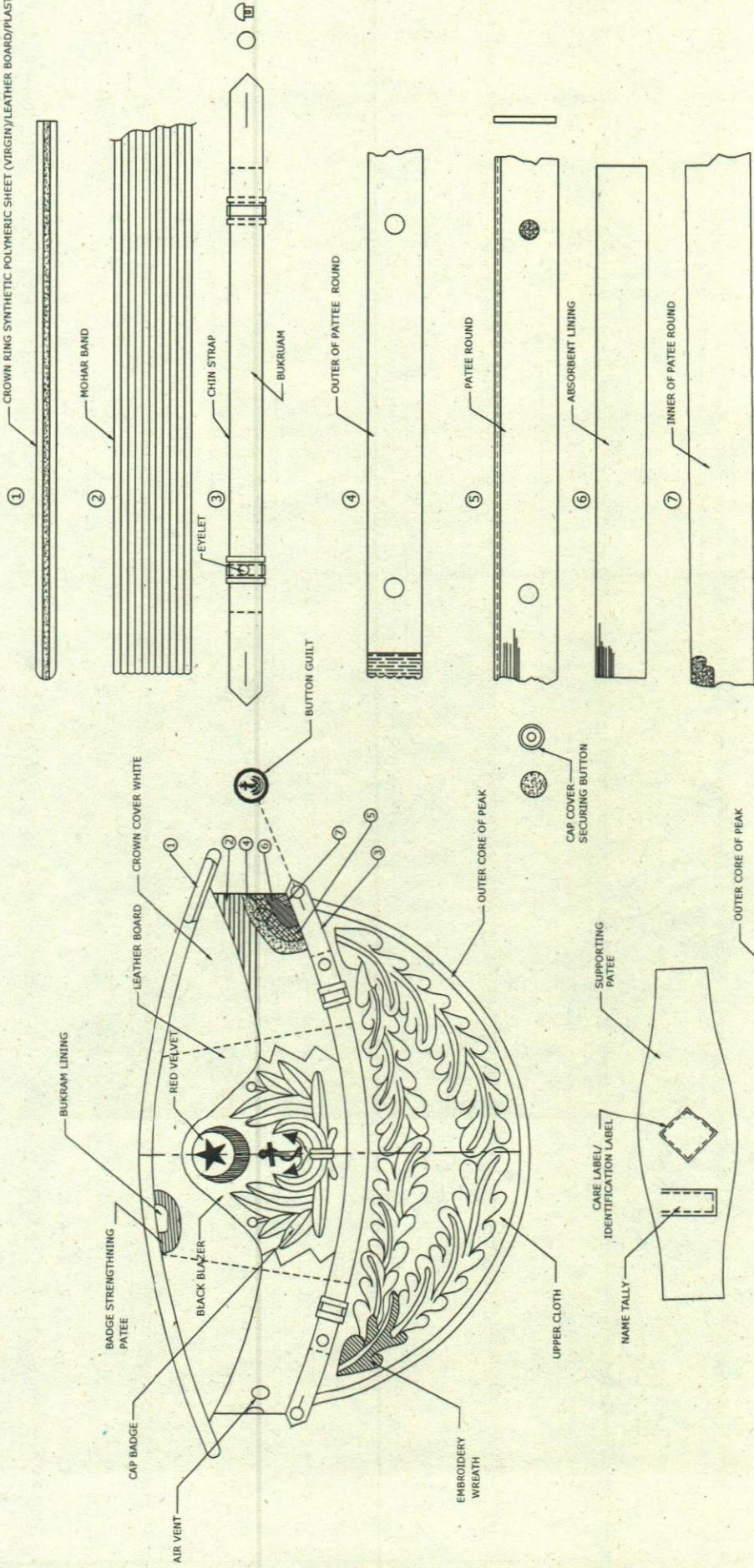
1494

NOTE:  
FOR FURTHER DETAILS SEE SPEC/APPRAVED SAMPLE

# TECHNICAL DRAWING

ANNEX "D" TO  
PN SPECIFICATION NO. 01/2023  
PROMULGATION DATE: OCT 2023

CROWN RING SYNTHETIC POLYMERIC SHEET (VIRGIN) LEATHER BOARD/PLASTIC



## MDITD NRD

**CAP PEAK WHITE**  
(COMMODORE)

DWG. NO.	TD-2667/2023	DIMENSIONS: mm	
DATE:	10-04-2023	SCALE: NTS	
REVISION NO.	00	FINALIZED	
DRAWN BY	M. ASGHAR HDM	CHECKED BY	

CAPTAIN	LT CDR SANA KANWAL
MYASSAR YAHIA	SO, TEXTILE
DIRECTOR ID	

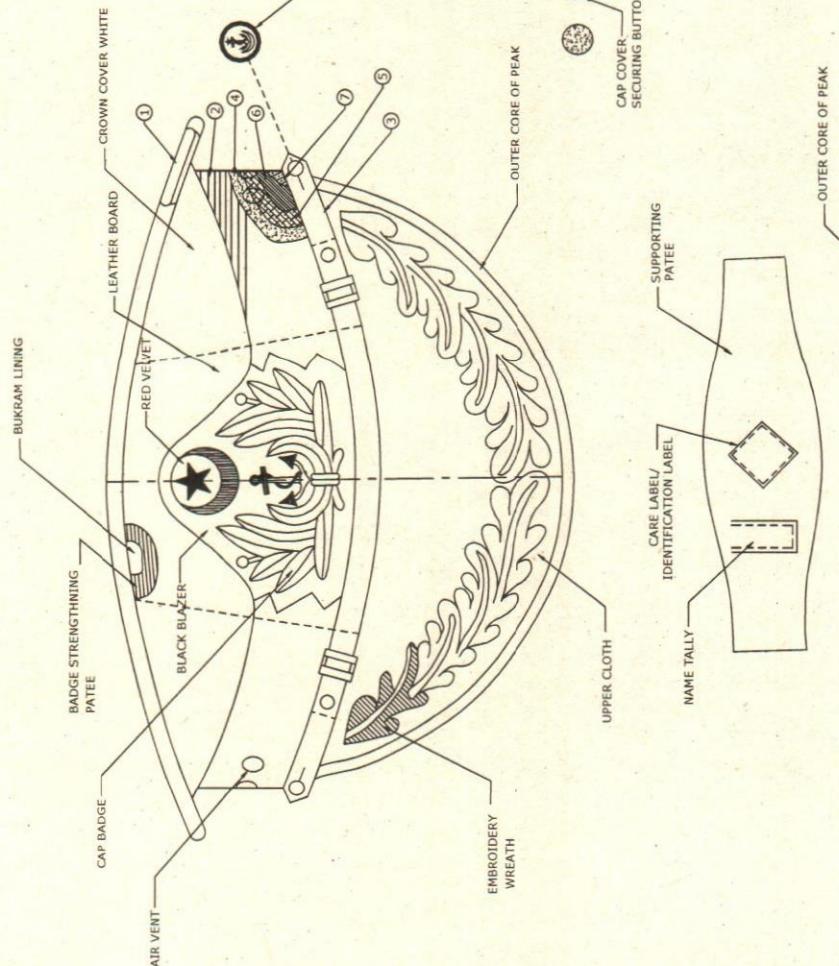
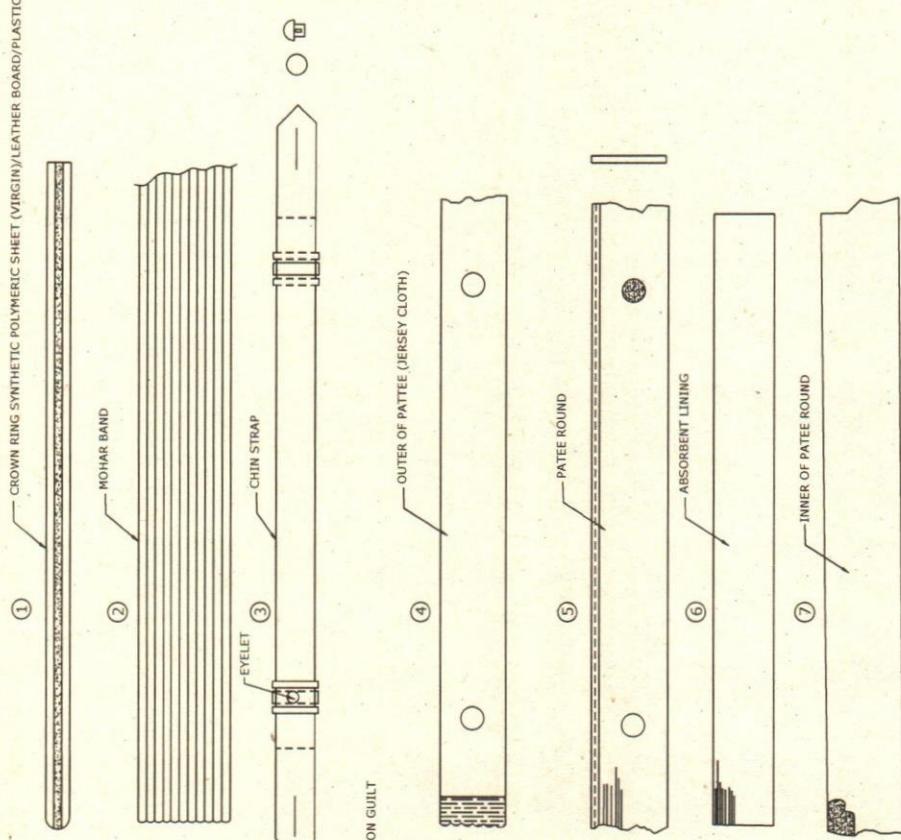
NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

1495

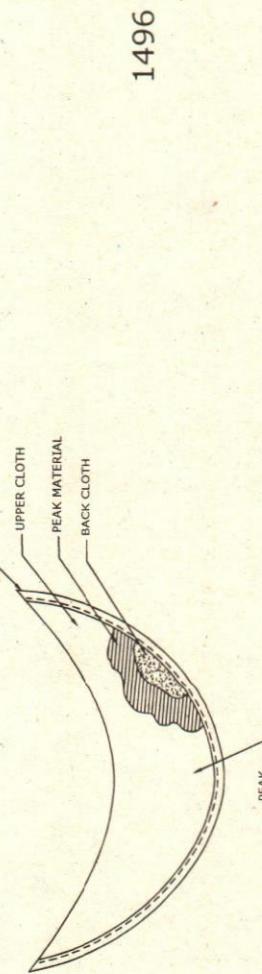
## TECHNICAL DRAWING

ANNEX "D" TO  
PN SPECIFICATION NO. 01/2023  
PROMulgATION DATE . OCT 2023

CROWN RING SYNTHETIC POLYMERIC SHEET (VIRGIN) LEATHER BOARD(PLASTIC)

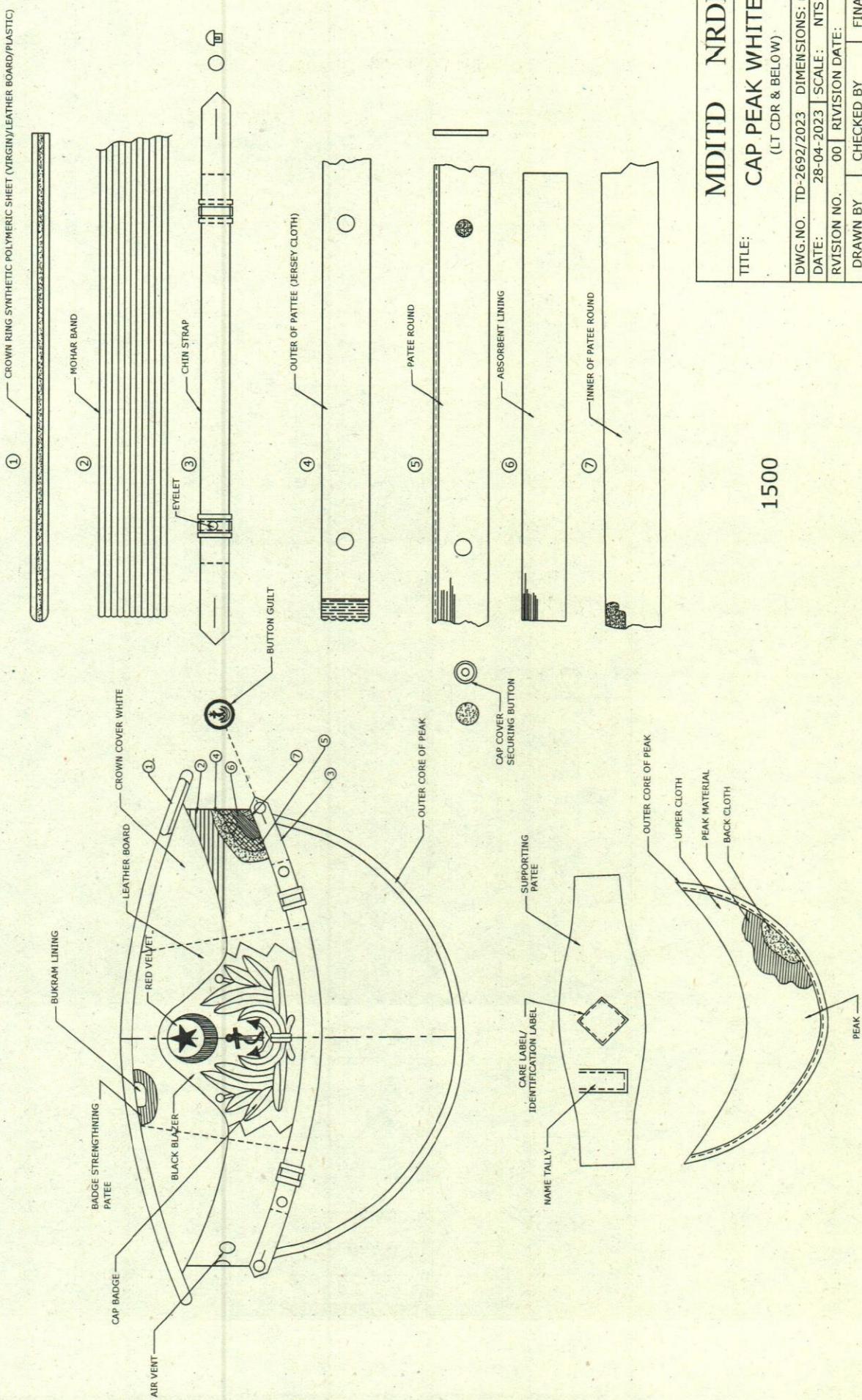


<b>MDITD NRDI</b>	
TITLE:	CAP PEAK WHITE (CAPT / CDR)
DWG. NO.	TD-2688/2023
DATE:	11-04-2023
SCALE:	NTS
REVISION NO.	00
DRAWN BY	CHECKED BY
M. ASGHAR HDM	LT CDR SANA KANWAL SO, TEXTILE
NOTE: FOR FURTHER DETAILS SEE	CAPTAIN M YASSAR YAHIA DIRECTOR ID



## TECHNICAL DRAWING

ANNEX "D" TO  
PN SPECIFICATION NO. 01/2023  
PROMULGATION DATE. OCT 2023



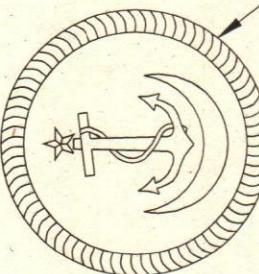
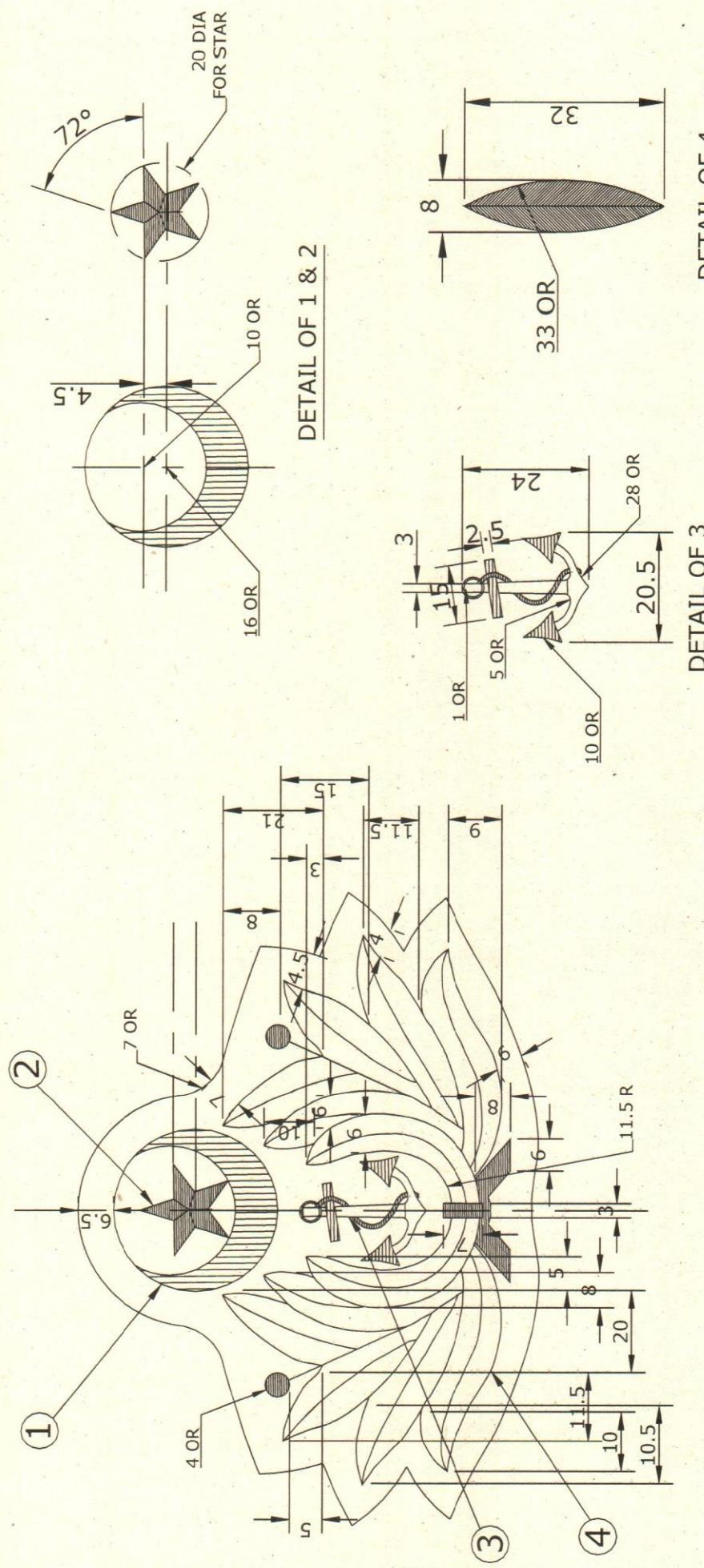
MDITD NRD	
TITLE:	CAP PEAK WHITE (LT CDR & BELOW)
DWG. NO.	TD-2692/2023
DATE:	28-04-2023
DIMENSIONS: mm	NTS
REVISION NO.	00
SCALE:	--
DRAWN BY	M. ASGHAR HDM
CHECKED BY	LTC DR SANA KANWAL SO, TEXTILE
FINALIZED	

NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

CAPTAIN	MASSAR YAHIA
DIRECTOR ID	

## TECHNICAL DRAWING

ANNEX "D" TO  
PN SPECIFICATION NO. 01/2023  
PROMulgATION DATE . OCT 2023



**MDITD NRD**

TITLE:  
**CAP BADGE FOR PN OFFICERS**

DWG. NO.	TD-2691/2023	DIMENSIONS: mm	
DATE:	28-04-2023	SCALE: NTS	
REVISION NO.	00	REVISION DATE:	-
DRAWN BY		CHECKED BY	FINALIZED
ADNAN NISAR D/MAN	LTCR SANAKANWAL SO, TEXTILE	CAPTAIN M YASSAR YAHYA DIRECTOR ID	

1499

NOTE:  
FOR FURTHER DETAIL SEE STOCK/APPROVED SAMPLE

BUTTON GUILT

PN SPECIFICATION NO 01/2023  
**ANNEX E TO**  
**PN SPECIFICATION NO 01/2023**  
**PROMULGATION DATE 23 OCT 23**

**GENERAL DEFECTS**  
**(ASTM D-3990)**

<b>S. No</b>	<b>Defects</b>	<b>Definition</b>
<b>FABRIC</b>		
a.	<b>Abrasion Mark (bruise, Chafe Mark or rub)</b>	An area of fabric damaged by friction Damaged due to abraded or uneven surface in a machine
b.	<b>Barré Mark</b>	An unintentional, repetitive visual pattern of continuous bars and stripes usually parallel to the filling of woven fabric or to the courses of circular knit 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.
c.	<b>Blotch,</b>	An off colored area of any shape caused by grease or Oil. (Syn. oil spot). Cause due to leakage/slippage from machine.
d.	<b>Bow</b>	A fabric condition resulting when filling yarns or knitting courses are displaced from a line perpendicular to the selvages and form one or more arcs across the width of fabric.
e.	<b>Broken/ Stitch</b>	Sewing threads are broken due to some make problem.
f.	<b>Clip mark:</b>	An open place causing a streak of variable length approximately parallel of the length of width.
g.	<b>Decanting Mark</b>	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.
h.	<b>Double Pick</b>	In woven fabrics, two picks wrongly place in the same shade.
j.	<b>Draw Back</b>	A weave distortion characterized by tight and slack places in the same warp yarn.
k.	<b>End out</b>	A void caused by a missing warp yarn.
l.	<b>Float</b>	In woven fabrics, the portion of a warp or filling yarn that extends unbound over two or more warp or filling yarns, in knitted fabrics, that portion of a yarn that is not knitted into loops.

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m.	<b>Frosting</b>	A change in color in a limited area of fabric cause by abrasive wear.
n.	<b>Hole</b>	In fabric, imperfection, wear one or more yarn or sufficiently damaged to create an aperture.
p.	<b>Fuzzy</b>	Characterized by a hair appearance due to protruding broken fibers or filaments.
q.	<b>Let-off Mark</b>	In woven fabrics, a corrugated defect pattern distributed across the fabric width.
r.	<b>Loom fly</b>	Waste fibers create during weaving that are woven into a fabric.
s.	<b>Loop Salvage</b>	An improperly woven salvage of uneven width or a salvage containing irregular filling loops extending beyond the outside edges.
t.	<b>Messiness</b>	Surface distortion in a fabric characterized by objectionable unevenness due to many minor deformations.
u.	<b>Pin Hole</b>	In fabric, a very small hole, approximately the size of the across section of the pin.
v.	<b>Shiner</b>	A streak, usually short caused of a lustrous section of filament yarn.
w.	<b>Smash</b>	In woven fabrics, relatively large hole characterized by broken yarn ends and floating picks.
x.	<b>Snag</b>	In fabrics, a yarn or part of a yarn pulled or plucked from the surface.
y.	<b>Thin Place</b>	In fabric, an intentionally in a fabric appearance characterized by a small area of loosely placed yarn or by a congregation of thin yarn as compared to the adjacent construction.
z.	<b>Tight Salvage</b>	In woven fabrics, salvage yarn shorter than warp yarn in the body of the fabric.
aa.	<b>Streak</b>	An extended unintentionally strips narrow width, often a single yarn.
ab.	<b>Tram Mage</b>	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.
ac.	<b>Tender Mark</b>	A visible deformation on the side edge or body of a fabric due to pressure for clips or pins.
ad.	<b>Skip Stitch</b>	Due to improper needle and looper action, some lines threads in stitch
ae.	<b>Uneven way stitch</b>	When the stitch line is not straight or properly wave
af.	<b>Cracked Stitch</b>	Stitches are broken due to dress elasticity in the same line

ag.	<b>Open Seam</b>	Due to improper feeding or when two parts of the fabric are not sewing properly.
ah.	<b>Needle Hole</b>	The hole created from the needle in the seam line during the sewing process
aj.	<b>Sharing/ Puckering</b>	The gathered fabric inside the seam line
ak.	<b>Pleat</b>	The folded fabric in the seam line
al.	<b>Twisting</b>	When the seam line becomes curve from one edge to another edge is called twisting defect
am.	<b>Part up down</b>	Two parts of the fabric are not equal in the seam edge.

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**ANNEX F TO**  
**PN SPECIFICATION NO 01/2023**  
**PROMULGATION DATE 23 OCT 23**

### Acceptable Quality Levels

1. Acceptable Quality Level (AQL) is maximum average defective items in a lot or limit / percentage of defective items in product /offered store. It is expressed in a percentage. Number of average defective items is determined by following formula:

$$\text{Average defective item} = \frac{\text{No.of defective item found during inspection}}{\text{Total no.of item to be inspected}} \times 100$$

2. AQL process: it is used for inspection of finished product by the QC professionals. AQL standard is depend on the quality of the product to be inspected, random sampling, and experience of inspector Following AQL table is used to determine lot size/ offered store quantity, least No. of sample to be inspected, AQL%, and acceptance & rejection points:

<u>Lot/Batch Size</u>	<u>Sample Size</u>	<u>Materials</u>	<u>Finished Caps</u>							
			Critical Defects				Major Defects		Minor Defects	
			<u>Ac</u>	<u>Re</u>	<u>Ac</u>	<u>Re</u>	<u>Ac</u>	<u>Re</u>	<u>Ac</u>	<u>Re</u>
2 - 8	2	0	1	0	1	0	1	0	1	0
9 ~ 15	3	0	1	0	1	0	1	0	1	0
16 ~ 25	5	0	1	0	1	1	2	1	2	1
26 ~ 50	8	0	1	0	1	1	2	1	2	1
51 ~ 90	13	1	2	1	2	1	2	2	2	3
91 ~ 150	20	1	2	1	2	2	3	3	3	4
151 ~ 280	32	2	3	2	3	3	4	5	6	
281 ~ 500	50	3	4	3	4	5	6	7	8	
501 ~ 1200	80	5	6	5	6	7	8	10	11	
1201 ~ 3200	125	7	8	7	8	10	11	14	15	
3201 ~ 10000	200	10	11	10	11	14	15	21	22	
10001 ~ 35000	315	14	15	14	15	21	22	21	22	
35001 ~ 150000	500	21	22	21	22	21	22	21	22	
150001 ~ 500000	800	21	22	21	22	21	22	21	22	
500001 ~ Over	1250	21	22	21	22	21	22	21	22	

3. If the inspector have time constrain then AQL is beneficial/ helpful in inspection of whole lot/ offered store. It safe time, cost and give effective/ statistical result of product /offered store. e.g. If inspector needs 1 minute to check the item , the quantity to be inspected is 2,500 items then it took 42 hours to check the whole consignment/ offered store. It means 26 days approx. for one store. Calculation is as follows:

$$\frac{1 \text{ min} \times 1 \text{ hr}}{1 \text{ item} \times 60 \text{ min}} \times 2,500 \text{ items} = 42 \text{ hrs} \cong 02 \text{ days}$$

After Implementing AQL standard so the sample taken from the lot/ offered store is 200 items/ sample:

$$\frac{1 \text{ min} \times 1 \text{ hr}}{1 \text{ item} \times 60 \text{ min}} \times 2,00 \text{ items} = 3.33 \text{ hrs} \cong \text{half quarter of a day}$$

4. Quality parameters/ AQL limits may be defined by Inspecting Authority (if deemed appropriate) and communicate to the manufacturer, so the manufacturer set their quality levels (AQL limits) accordingly for their internal audit. Therefore, good quality product is ready for inspection.

**ANNEX G TO**  
**PN SPECIFICATION No 01/2023**  
**PROMULGATION DATE 23 OCT 23**

**FEEDBACK 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

PN SPECIFICATION NO 01/2023

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